

UNIVERSITY OF MINNESOTA BULLETIN



EXTENSION CLASSES 1984-85

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

Counseling and Program Advising
 314 Nolte Center
 University of Minnesota
 315 Pillsbury Drive S.E.
 Minneapolis, Minnesota 55455

373-3195

373-3905

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 **Registration dates**, pages 10-19)

Where to call . . .

Extension phone numbers

CANCELLATION INFORMATION	373-3196
CONTINUING EDUCATION FOR WOMEN	373-9743
CORRESPONDENCE COURSES (INDEPENDENT STUDY)	373-3256
COUNSELING	373-3905
DEGREES AND CERTIFICATES	373-3905
DIRECTOR	373-3942
EXTENSION BULLETIN REQUEST	376-3000
EXTENSION RECORDS (WILLIAMSON HALL)	376-1680
GENERAL INFORMATION (EXTENSION CLASSES)	373-3195
HEALTH SERVICE	373-3780
INFO NEWSLETTER	376-7500
INSTRUCTORS' TELEPHONE NUMBERS	373-3196
MacPHAIL CENTER	373-1925
MAPS (CAMPUS OR PARKING)	376-7500
REGISTRATION	373-3195
REGISTRATION FORMS	376-3000
SAMPLER LECTURES	376-7500
SPECIAL CLASSES	373-5166
STUDENT BOARD	376-7500
TELEVISION CLASSES	376-4925
VETERANS INFORMATION	373-5777

Bookstores phone numbers

BOOKS UNDERGROUND (ST. PAUL)	373-0800
HEALTH SCIENCES	376-4007
MINNESOTA BOOK CENTER (WILLIAMSON HALL, EAST BANK)	373-3688
WEST BANK (SMITH)	373-4450

University phone numbers

ATHLETIC FACILITIES	373-4200
ATHLETIC TICKET OFFICE	373-3181
CONCERTS AND LECTURES	373-2345
DAY SCHOOL BULLETINS	373-2153
LIBRARIES	373-3082
UNIVERSITY INFORMATION	373-2851
UNIVERSITY POLICE	373-3550
UNIVERSITY THEATRE	373-2337

Volume LXXXVII, Number 10

June 26, 1984

UNIVERSITY OF MINNESOTA BULLETIN
 (USPS 651-720)

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Bulletin Use

The contents of this bulletin and other University bulletins, publications, or announcements are subject to change without notice. University offices can provide current information about possible changes.

Credit and Noncredit Courses

The *Extension Classes Bulletin* is divided into two sections: *Credit Courses* and *Noncredit Courses*. *Credit Courses*, listed alphabetically by department name, begin on page 61. For the first time, Continuing Education for Women credit courses are included in this section (see list page 439).

Noncredit Courses, which include *Continuing Education for Women Courses*, *Informal Courses*, *MacPhail Center Courses*, and *Professional Improvement Courses and Seminars*, have a separate section all their own. It begins on page 441.

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(continued next page)

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

Cover Art: The bulletin cover is the creation of illustrator Greg Michaels, whose distinctive work has appeared on several Continuing Education and Extension publications in recent years. The adult learners portrayed on the cover and throughout this bulletin represent the wide range of people taking Extension classes, whether it's to complete a degree, develop job skills, or pursue a favorite interest.

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11 ways to earn credit at the University of Minnesota

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

1. Extension Classes (including Continuing Education for Women)

Register for Extension classes offered at any of several convenient locations near you! See pages 543 and 628.

2. Extension Independent Study Correspondence Courses

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

3. TV, Radio Courses (Extension Independent Study)

U of M credit is available for several radio and television courses. See pages 48 and 551.

4. Continuing Education for Women

Continuing Education for Women offers daytime liberal arts seminars and courses both on and off campus for credit. (Men are welcome in the classes too!) Telephone 373-9743. See page 49.

5. Credit by Examination

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

6. CLEP Program

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

7. Independent Study

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

8. Extra Credit

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

9. University College

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

10. Cooperative Programs

Receive up to 90 "blanket" credits toward a General College degree for technical courses taken and completed at approved institutions. See page 557.

11. Directed Study, Research Projects

Earn credit by designing directed study and/or research projects around your job activities or involvement in the community. See page 46.

Questions & Answers

Questions most often asked about Extension Classes:

Most answers to questions about Extension Classes and Continuing Education for Women are found in this Bulletin. Check the Index at the back of this Bulletin.

1. How do I register? What hours can I register? Where do I register? (See page 9)
2. How can I earn a degree entirely through Extension? Which ones? (See page 555)
3. I have been attending college elsewhere. How can I continue my educational program through Extension? (See page 53)
4. When does registration for classes begin? End? (See page 9)
5. How do I get the credits I've earned in Extension entered on my college transcript? (See page 44)
6. What do I have to do to use my G.I. benefits to take Extension Classes? (See page 38)
7. Are there admission requirements for Extension Classes? (See page 32)
8. Are there ways to get credits without attending class? (See page 46)
9. Can I get any financial assistance to take Extension Classes? (See page 34)
10. What is the difference between certificate and degree credit? (See page 44)
11. Are classes offered at off-campus locations near my home or work? (See page 628)
12. What are noncredit "Informal Courses"? (See page 470) "Sampler Lectures"? (See pages 49 and 541)
13. Can I take classes during the day or on weekends? (See page 547)

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

Messages

I have long believed that the distinction between "continuing education" and "traditional education" is a false dichotomy. Indeed, all education is "continuing" in the sense that learning should be a lifelong process, and all education is "traditional" in that it should embrace the common good of society and the individual.

I also subscribe to the philosophy that there should be no difference in the quality of education available to students simply as a result of artificial distinctions such as the time or the place of the learning experience.

I trust you will find the University of Minnesota's Continuing Education and Extension programs to be a satisfactory and rewarding blend of both the continuing and traditional learning models. Furthermore, I am confident that you will be impressed by the outstanding quality of programs available through this Division.

In closing, I wish you the best of luck in your lifelong educational endeavors. Cordially,

C. Peter Magrath
President, University of Minnesota

Go with the best. Lifelong learning means that school isn't just for kids anymore. Studies show us that adults are going to school in record numbers—many to update job skills, many to enrich their lives with liberal education. The University of Minnesota can provide both job-slanted education and an enriching and satisfying intellectual and social experience. If you're thinking about taking some courses, why not go with the best at the University of Minnesota? The Department of Extension Classes here at the University offers opportunities for adults to take courses to prepare themselves for career changes, to complete unfinished degrees, or to learn something they have always wanted to know. We welcome you to the courses and activities listed in this Bulletin and trust that they will help make lifelong learning a reality for you.

Harold A. Miller
Dean, Continuing Education and Extension

You are fortunate to live in an area where a major university has a major continuing education program. The Twin Cities campus had the largest student enrollment in the nation in 1983-84, according to a national survey. Extension Classes enrolled over 40,000 different students making it one of the largest programs of its type in the country.

What does this mean for you? It means you have available a wide selection of courses from well over 100 academic departments in several colleges of the University. It means you can obtain a college degree choosing from a number of majors. It means you have opportunities for professional updating in business, technology, and other professions. And it means you can pursue a wide range of avocational interests drawing on the resources of the University's faculty.

I hope you will take advantage of these opportunities offered through University of Minnesota Extension classes to further your educational, professional, or avocational goals.

John S. Malmberg
Director, Extension Classes

University of Minnesota

Board of Regents

Lauris D. Krenik, Madison Lake, Chair; Charles F. McGuiggan, Marshall, Vice Chair; Charles H. Casey, West Concord; William B. Dosland, Moorhead; Willis K. Drake, Edina; Erwin L. Goldfine, Duluth; Wally Hilke, St. Paul; David M. Lebedoff, Minneapolis; Verne Long, Pipestone; Wenda Moore, Minneapolis; David K. Roe, St. Paul; Mary T. Schertler, St. Paul.

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CONTINUING EDUCATION AND EXTENSION

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Eleanor S. Fenton, Associate Dean

Barbara J. Stuhler, Associate Dean

Gerald A. Klement, Administrative Director

Departments and Directors

Audio Visual Library Service, Judith A. Gaston, 3300 University Ave. S.E.

College of Liberal Arts Continuing Education, Roger B. Page, 202 Johnston Hall

Community Services, Carol Lund, 320 Wesbrook Hall

Community Development, 2610 University Ave. S.E.

Continuing Education in the Arts, 320 Wesbrook Hall

Elderhostel Program, 320 Wesbrook Hall

Fire Information, Research, and Education (FIRE) Center, 33 North Hall

Office of Delinquency Control, 119 Temporary North of Appleby

Peer Counseling, 320 Wesbrook Hall

Prison Programs, 206 Wesbrook Hall

Conferences, M. Alan Brown, 131 Nolte Center for Continuing Education

Continuing Education for Engineers and Scientists, 222 Nolte Center for Continuing Education

Continuing Management Education, 338 Nolte Center for Continuing Education

Continuing General College Education, Marjorie H. Ahrens, 106 Nicholson Hall

Continuing Medical Education, Barton W. Galle, 3-110 Owre

Continuing Education in Nursing and Social Work, Sharon L. Vegoe, 107 Armory

Continuing Education in Pharmacy, Thomas M. McKennell, 7-125 HSUnitF

Counseling, Vera M. Schletzer, 314 Nolte Center for Continuing Education

Duluth Continuing Education Center, Gregory R. Fox, 403 Darland Administration Building, Duluth Campus

Extension Classes, John S. Malmberg, 170 Wesbrook Hall

Independent Study, David M. Grossman, 33 Wesbrook Hall

MacPhail Center for the Arts, Gary L. Zeller, 1128 LaSalle Ave., Minneapolis

Morris Continuing Education Center, Roger S. McCannon, 226 Community Services Building, Morris Campus

Rochester Continuing Education Center, Raymund T. Fitzpatrick, 1200 South Broadway, Rochester

University Media Resources, Sheldon Goldstein, 540C Rarig Center

Administrative Support Services

Communication Services,
Gayle Hendrickson, Director

Development Office, Claire Olson,
Coordinator
Finances, Rebecca Hurst, Accountant

Extension Classes Staff

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Beverly R. Sinniger, Assistant Director
William R. VanEssendelft, Assistant
Director

Vickie Roberts, Student Support
Services Associate
Barb Halvorson, Accounts Supervisor
Steven J. Vite, Editor
Charles R. Cheesebrough, Editor

Extension Classes Programs—Credit classes, Continuing Education for Women, Early Childhood Studies, Elderhostel, Informal Courses, Neighborhood Programs, Real Estate, Study Abroad, Split Rock Arts Program—**Program Staff:**

Elvin Balkcum
Joan Claesgens
Gayle Foreman
Mary Lou Gilstad
Torild Homstad

Judi Linder
Susan Lindoo
Philip E. Lundblad
Thomas Musil
David O'Fallon

Counseling Department Staff

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Keith D. Buckley, Counselor
Jeanne M. Bisanz, Junior Student Personnel
Worker
Gail M. Fraser, Junior Student Personnel
Worker
Jacquelyn A. Henning, Senior Student
Personnel Worker
Rebecca O. Johnson, Counselor
Christina M. Jones, Program Adviser
Dennis Keierleber, Counselor

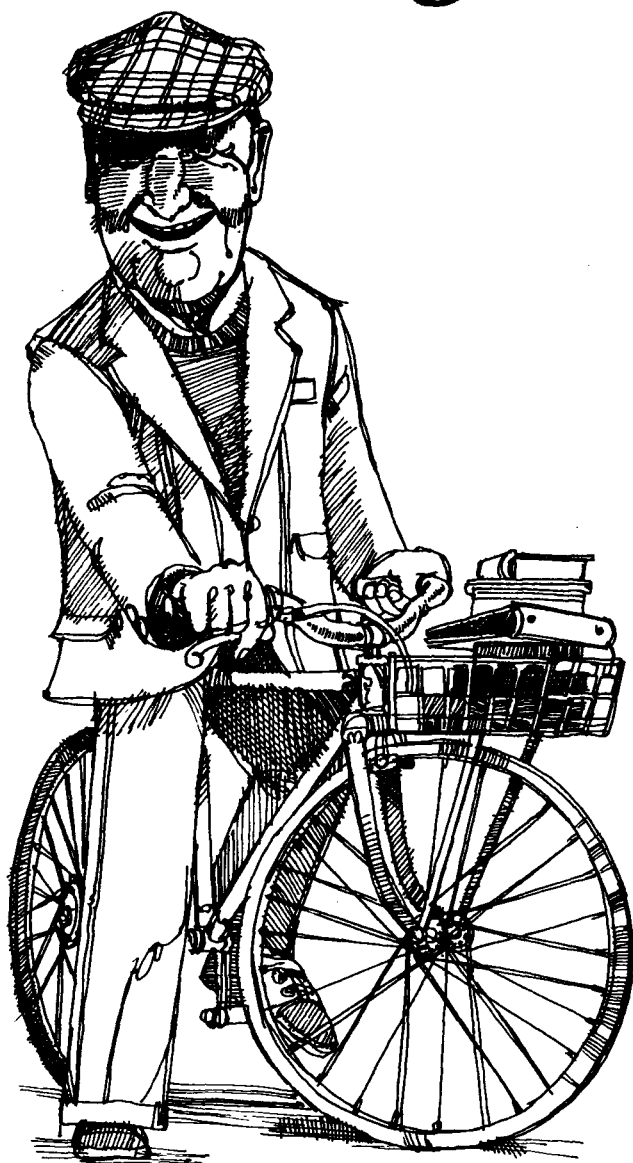
Richard J. Kott, Counselor
Karen A. Nelson, Counselor
Teresa M. Petek, Program Adviser
Susanne M. Peterson, Counselor
Wendylee Raun, Program Adviser
Darryl P. Sedio, Counselor
Fran Van Slyke-Zaslofsky,
Senior Student Personnel Worker

Equal Opportunity

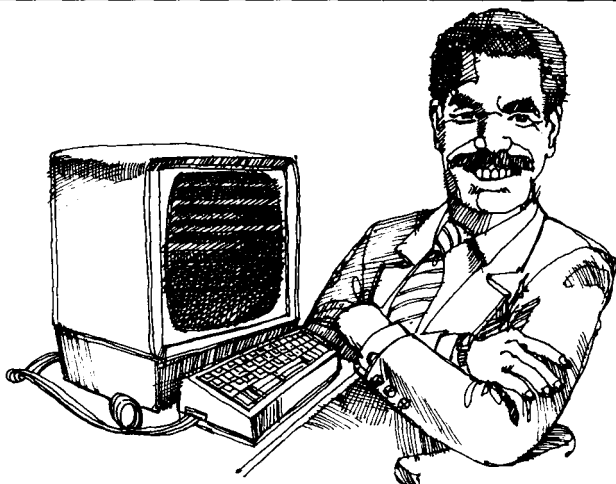
The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, religion, color, sex, national origin, handicap, age or veteran status. In adhering to this policy, the University abides by the requirements of Title IX of the Education Amendments of 1972, by Sections 503 and 504 of the Rehabilitation Act of 1973, by Executive Order 11246, as amended: 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 Lillian H. Williams, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, 100 Church Street S.E., University of Minnesota, Minneapolis, Minnesota 55455, (612) 373-7969, or to the Director of the Office of Civil Rights, Department of Education, Washington, DC 20202, or to the Director of the Office of Federal Contract Compliance Programs, Department of Labor, Washington, DC 20210.

When and How to Register



Fall Quarter



<p>AUGUST 1984</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>NOVEMBER 1984</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 30</p>
<p>SEPTEMBER 1984</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>	<p>DECEMBER 1984</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 31</p>
<p>OCTOBER 1984</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>	

Important dates

September 20, Thursday
Fall Quarter classes begin

November 2, Friday
Last day for official cancellation of classes with automatic "W"; cancellations after this date require instructor's permission, see page 54

November 22-23
Thanksgiving holidays; all offices closed and all classes dismissed

December 3-8
Final examination period

December 8, Saturday
Last day of Fall Quarter

Classes meet the week of September 20 (Thursday) through December 8

Fall Quarter

Registration dates

Mail registration (all classes)

Campus Office (101 Wesbrook Hall)

August 13-September 12

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

In-person registration (all classes)

Campus Office (101 Wesbrook Hall)

September 5-12 (except Friday) 12 noon to 8 p.m.
(Friday hours 12 noon to 4:30 p.m.; closed weekends)

MacPhail Office (1128 LaSalle Ave.)

September 5-12 (except Friday) 12 noon to 8 p.m.
(Friday hours 12 noon to 4:30 p.m.; closed weekends)

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

September 5-12 9 a.m.-5 p.m.
(Closed weekends)

SEPTEMBER 12, WEDNESDAY: The last day for registration and payment of tuition without a late fee.

Late registration

Campus Office (101 Wesbrook Hall)

September 13-14: Registration and cashier's offices closed to process registrations; late registration accepted by mail only with \$5 late fee.

September 17-18 12 noon to 8 p.m.

September 19, Reopening day (closed classes) 8 a.m. to 4:30 p.m.

September 20: Late registration resumes by mail or in person through the first week of classes with a \$5 late fee. For information regarding registration and late fees during or after the second week of class, see page 24. For regular office hours, see page 27.

Fall Semester

Important dates



September 20, Thursday
Fall Semester classes begin

November 21, Wednesday
Last day for official cancellation of classes with automatic "W"; cancellations after this date require instructor's permission, see page 54

November 22-23
Thanksgiving holidays; all offices closed and all classes dismissed

December 20-21
Registration and cashier's offices closed to process Winter Quarter registrations

December 10, Monday
Holiday recess begins; classes dismissed until Monday, January 7

December 24-25
Holiday; all offices closed

December 31-January 1
New Year's holiday; all offices closed

January 7, Monday
Fall Semester classes resume

January 28-February 9
Final examination period

February 9, Saturday
Last day of Fall Semester

<p>AUGUST 1984</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>NOVEMBER 1984</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 30</p>
<p>SEPTEMBER 1984</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>	<p>DECEMBER 1984</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 31</p>
<p>OCTOBER 1984</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>JANUARY 1985</p> <p>S M T W T F S</p> <p>1 2 3 4 5</p> <p>6 7 8 9 10 11 12</p> <p>13 14 15 16 17 18 19</p> <p>20 21 22 23 24 25 26</p> <p>27 28 29 30 31</p>

Classes meet the week of September 20 (Thursday) through February 9

Fall Semester

Registration dates

Mail registration (all classes)

Campus Office (101 Wesbrook Hall)

August 13-September 12

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

In-person registration (all classes)

Campus Office (101 Wesbrook Hall)

September 5-12 (except Friday).....12 noon to 8 p.m.
(Friday hours 12 noon to 4:30 p.m.; closed weekends)

MacPhail Office (1128 LaSalle Ave.)

September 5-12 (except Friday).....12 noon to 8 p.m.
(Friday hours 12 noon to 4:30 p.m.; closed weekends)

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

September 5-129 a.m. to 5 p.m.
(Closed weekends)

SEPTEMBER 12, WEDNESDAY: The last day for registration and payment of tuition without a late fee.

Late registration

Campus Office (101 Wesbrook Hall)

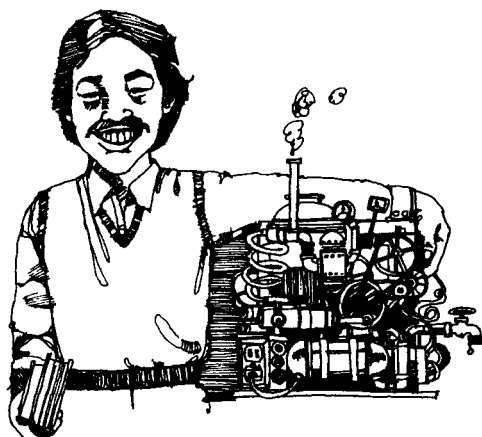
September 13-14: Registration and cashier's offices closed to process registrations; late registration accepted by mail only with \$5 late fee.

September 17-1812 noon to 8 p.m.

September 19, Reopening day (closed classes)8 a.m. to 4:30 p.m.

September 20: Late registration resumes by mail or in person through the first week of classes with a \$5 late fee. For information regarding registration and late fees during or after the second week of class, see page 24. For regular office hours, see page 27.

Winter Quarter



Important dates

December 20-21, 24-25
Registration and cashier's offices closed to process Winter Quarter registrations and for holidays.

December 31-January 1
New Year's holiday;
all offices closed

January 7, Monday
Winter Quarter classes begin

February 15, Friday
Last day for official cancellation of classes with automatic "W"; cancellations after this date require instructor's permission, see page 54

March 18-23
Final examination period

March 23, Saturday
Last day of Winter Quarter

March 25, Monday
Winter holiday; all offices closed.

<p>NOVEMBER 1984 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</p>	<p>JANUARY 1985 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</p>
<p>DECEMBER 1984 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</p>	<p>FEBRUARY 1985 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</p>
	<p>MARCH 1985 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</p>

Classes meet the week of January 7 through March 23

Winter Quarter

Registration dates

Mail registration (all classes)

Campus Office (101 Wesbrook Hall)

November 19-December 19

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

In-person registration (all classes)

Campus Office (101 Wesbrook Hall)

December 11-19 (except Friday)9 a.m. to 8 p.m.
(Friday hours 9 a.m. to 4:30 p.m.; closed weekends)

MacPhail Office (1128 LaSalle Ave.)

December 11-19 (except Friday)9 a.m. to 7 p.m.
(Friday hours 9 a.m. to 4:30 p.m.; closed weekends)

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

December 11-199 a.m. to 5 p.m.
(Closed weekends)

DECEMBER 19, WEDNESDAY: The last day for registration and payment of tuition without a late fee.

Late registration

Campus Office (101 Wesbrook Hall)

December 20-21: Registration and cashier's offices closed to process registrations; late registration accepted *by mail only* with \$5 late fee.

December 24-25Holiday; all offices closed

December 26-288 a.m. to 4:30 p.m.

December 31-January 1**Holiday; all offices closed**

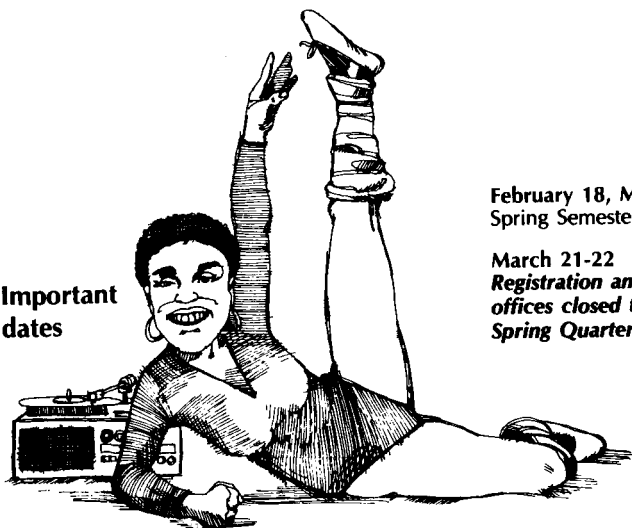
January 2-38 a.m. to 4:30 p.m.

January 4, Reopening day (closed classes)8 a.m. to 4:30 p.m.

January 7: Late registration resumes by mail or in person with \$5 late fee through the first week of classes. For information regarding registration and late fees during or after the second week of classes, see page 24. For regular office hours, see page 27.

Spring Semester

Important dates



February 18, Monday
Spring Semester classes begin

March 21-22
*Registration and cashier's
offices closed to process
Spring Quarter registrations*

March 25, Monday
Spring Semester recess begins;
classes dismissed until April 1

March 25, Monday
Winter holiday; all
offices closed.

April 1, Monday
Spring Semester classes resume

April 12, Friday
Last day for official cancellation of
classes with automatic "W";
cancellations after this date
require instructor's permission,
see page 54

May 27, Monday
Memorial Day holiday; all offices
closed and all classes dismissed

June 10-15
Final examination period

June 15, Saturday
Last day of Spring Semester

<p>JANUARY 1985</p> <p>S M T W T F S</p> <p>1 2 3 4 5</p> <p>6 7 8 9 10 11 12</p> <p>13 14 15 16 17 18 19</p> <p>20 21 22 23 24 25 26</p> <p>27 28 29 30 31</p>	<p>APRIL 1985</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>
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Classes meet the week of February 18 through June 15

Spring Semester

Registration dates

Mail registration (all classes)

Campus Office (101 Wesbrook Hall)

November 19-February 6

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

In-person registration (all classes)

Campus Office (101 Wesbrook Hall)

December 11-19 (except Friday)9 a.m. to 8 p.m.
(Friday hours 9 a.m. to 4:30 p.m.; closed weekends)

MacPhail Office (1128 LaSalle Ave.)

December 11-19 (except Friday)9 a.m. to 7 p.m.
(Friday hours 9 a.m. to 4:30 p.m.; closed weekends)

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

December 11-199 a.m. to 5 p.m.
(Closed weekends)

December 20-21: Registration and cashier's offices closed to process registrations.

December 26-February 6: Spring semester registration continues in person and by mail on campus only; see office hours on page 27.

FEBRUARY 6, WEDNESDAY: The last day for registration and payment of tuition without a late fee.

Late registration

Campus Office (101 Wesbrook Hall)

February 15, Reopening day (closed classes)8 a.m. to 4:30 p.m.

February 7-22: Late registration resumes by mail or in person with \$5 late fee through the first week of classes. For information regarding registration and late fees during or after the second week of classes, see page 24. For regular office hours, see page 27.

Spring Quarter



Important dates

March 25, Monday
Winter holiday; all offices closed

April 1, Monday
Spring Quarter classes begin

May 10, Friday
Last day for official cancellation of classes with automatic "W"; cancellations after this date require instructor's permission, see page 54.

May 27, Monday
Memorial Day holiday; all offices closed and all classes dismissed

June 10-15
Final examination period

June 15, Saturday
Last day of Spring Quarter

The summer *Bulletin* will be available early April, 1985. Telephone 376-3000

Tentative dates for summer 1985:
First five-week term:
June 17 to July 19
Ten-week term:
June 17 to August 23
Second five-week term:
July 22 to August 23

<p>FEBRUARY 1985</p> <table border="1"> <thead> <tr> <th>S</th> <th>M</th> <th>T</th> <th>W</th> <th>T</th> <th>F</th> <th>S</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td>2</td> </tr> <tr> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> </tr> <tr> <td>10</td> <td>11</td> <td>12</td> <td>13</td> <td>14</td> <td>15</td> <td>16</td> </tr> <tr> <td>17</td> <td>18</td> <td>19</td> <td>20</td> <td>21</td> <td>22</td> <td>23</td> </tr> <tr> <td>24</td> <td>25</td> <td>26</td> <td>27</td> <td>28</td> <td></td> <td></td> </tr> </tbody> </table>	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			<p>MAY 1985</p> <table border="1"> <thead> <tr> <th>S</th> <th>M</th> <th>T</th> <th>W</th> <th>T</th> <th>F</th> <th>S</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> <td></td> <td>1</td> <td>2</td> <td>3</td> </tr> <tr> <td>4</td> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> </tr> <tr> <td>11</td> <td>12</td> <td>13</td> <td>14</td> <td>15</td> <td>16</td> <td>17</td> </tr> <tr> <td>18</td> <td>19</td> <td>20</td> <td>21</td> <td>22</td> <td>23</td> <td>24</td> </tr> <tr> <td>25</td> <td>26</td> <td>27</td> <td>28</td> <td>29</td> <td>30</td> <td>31</td> </tr> </tbody> </table>	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														
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Classes meet the week of April 1 through June 15

Spring Quarter

Registration dates

Mail registration (all classes)

Campus Office (101 Wesbrook Hall)

February 18-March 20

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

In-person registration (all classes)

Campus Office (101 Wesbrook Hall)

March 12-20 (except Friday) 9 a.m. to 8 p.m.
(Friday hours 9 a.m. to 4:30 p.m.; closed weekends)

MacPhail Office (1128 LaSalle Ave.)

March 12-20 (except Friday) 9 a.m. to 7 p.m.
(Friday hours 9 a.m. to 4:30 p.m.; closed weekends)

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

March 12-20 9 a.m. to 5 p.m.
(Closed weekends)

MARCH 20, WEDNESDAY: The last day for registration and payment of tuition without a late fee.

Late registration

Campus Office (101 Wesbrook Hall)

March 21-22: Registration and cashier's offices closed to process registrations; late registration accepted by mail only with \$5 late fee.

March 25 Holiday; all offices closed

March 26-28 8 a.m. to 8 p.m.

March 29, Reopening day (closed classes) 8 a.m. to 4:30 p.m.

April 1: Late registration resumes by mail or in person with a \$5 late fee through the first week of classes. For information regarding registration and late fees during or after the second week of class, see page 24. For regular office hours, see page 27.

Register by mail or in person

These are registration procedures for limited-enrollment classes and nonlimited-enrollment classes.

Read through these procedures carefully before you register! Correct registration is the student's responsibility. If you have questions after reading the information on registration procedures, call 373-3196. Most of the questions students ask are answered on these pages.

Registration procedures differ for limited-enrollment classes and nonlimited-enrollment classes. Limited-enrollment classes have specified limits on the number of students that will be permitted into the class. These courses are starred and the course number and title are printed in red in this bulletin. 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 classes. For complete details see the instructions for **Registration by Mail**.

Courses without enrollment limits have numbers and titles printed in black ink in this bulletin. Early registration is recommended even for nonlimited-enrollment classes to allow sufficient time for processing and return of fee statements. In rare cases, it may be necessary to place enrollment limits on nonlimited classes.

General registration instructions

- 1. Obtain official registration forms at an Extension Classes registration office at any time during office hours; or call 376-3000 to request that registration forms be sent to you.** Forms for athletic facility use, the health service plan, and veterans benefits certification can be requested at this telephone number also (see the index at the end of this bulletin for page numbers where these services are explained).

Regular registration offices are at 101 Wesbrook Hall on the Minneapolis campus (east bank) of the University of Minnesota and at the MacPhail Center in downtown Minneapolis at 1128 LaSalle Avenue. A downtown St. Paul registration booth, open only during in-person registration periods, is located on the Skyway level of the Northwestern National Bank Building, Fifth and Minnesota streets. See maps near the end of this bulletin. Registration forms are also available at certain suburban neighborhood locations; see page 25 for addresses.

- 2. Complete the registration form giving all the requested information.** A sample registration form is shown on the opposite page.
 - a. 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; if there have been any changes to the room, day, or time you will be notified of those changes. A sample course description appears on page 23.

If you do not have a University student I.D. number, leave that space blank.

For information about grade base option, see pages 42 and 43.

Nontranscript registrations are those that apply to noncredit students (other than auditors) and certain noncredit courses; they are explained on pages 48 and 49.

Be sure to complete the enrollment period section giving the term and year (e.g., Fall Qtr 84 or Winter Qtr 85). If your course is offered on a special term, fill in the start and end dates in the space provided.

Birth dates and social security numbers must be included for coding purposes.

b. Please type or use ball point pen and press hard so all five copies of the registration form are legible. If all copies are not legible, fee statements cannot always be returned to students who register by mail, or record of enrollment may not be properly made on University files.

Keep the registration form intact. Do not remove carbons or receipts.

3. You are not registered until your tuition and fees are paid. Checks must be for the full amount of the tuition and fees and made payable to the University of Minnesota. Be sure to include special fees, course fees, and late fees, when applicable.

Students are urged to pay fees by personal check or money order. Change is not always available at in-person registration locations, and cash cannot be accepted at the downtown St. Paul registration booth.

4. You may register for classes during the following registration periods.

	Fall Qtr, Sem	Winter Qtr	Spring Sem	Spring Qtr
Registration by mail	Aug 13-Sept 12	Nov 19-Dec 19	Nov 19-Feb 6	Feb 18-Mar 20
In-person registration	Sept 5-12	Dec 11-19	Dec 11-19	Mar 12-20
Last day to register without a late fee	Sept 12, 1984	Dec 19, 1984	Feb 6, 1985	Mar 20, 1985

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

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

Sample registration form

UNIVERSITY OF MINNESOTA				Department of Extension Classes			
Continuing Education and Extension				REGISTRATION FORM			
DEPARTMENT	COURSE NO.	SECTION	CREDIT	GRADE BASE A/N <input checked="" type="checkbox"/> S/N <input type="checkbox"/> A/D <input type="checkbox"/>	GRADUATE CREDIT REQUESTED (SEE BULLETIN FOR EXPLANATION)		<input checked="" type="checkbox"/>
ArtS	5340	3	4				
DAY	HOUR	LOCATION	ROOM	COURSE TITLE AS APPEARS IN BULLETIN		PRG NO.	NON-TRANSCRIPT REGISTRATION
Th	6:10-9	ArtB	50	Sculpture: Wood and Stone		97	PRICE OVER \$ UNDER \$ OTHER
TUITION	COURSE FEES	SPECIAL FEES	LATE FEE	COURSE TOTAL			
\$154	\$40	\$5	--	\$199			
UOPM STUDENT ID. NO.				ENROLLMENT PERIOD IS			
95002030				85			
NAME LAST		FIRST	MIDDLE	BIRTH DATE (USE NUMERICS)		1ST SUMMER TERM <input type="checkbox"/> (s) 2ND SUMMER TERM <input type="checkbox"/> (s)	
Klack		Dennis	M.	MONTH 6 / DAY 28 / YEAR 52		WIN QTR. <input type="checkbox"/> (s) SPR SEM <input type="checkbox"/> (s)	
LOCAL STREET ADDRESS (INCLUDING APT. NO. IF APPROPRIATE)				SOCIAL SECURITY NO.			
56 Knollways Circle North				303-040-0101			
CITY		STATE	ZIP CODE	HOME PHONE	SEE	16 WEEK SUMMER TERM <input type="checkbox"/> (s)	
South St. Paul		MN	55000	829-0880	<input checked="" type="checkbox"/>	SPECIAL TERM <input type="checkbox"/> (s)	
OCCUPATION		BUSINESS PHONE		EXT.		MONTH / DAY / YEAR	
Occupational Therapist		829-9443		23		START DATE / / END DATE / /	

Registration by mail

1. Follow the steps outlined above in general registration instructions.
2. Make out a separate check to pay your tuition and fees for each limited class you register for by mail. If one check is used to pay for two or more classes and one class is closed, the registrations cannot be processed and must be returned to you. Nonlimited-enrollment class registrations may be paid for by writing one check only. Do not send cash.
3. If there are classes or sections of classes that are acceptable alternatives to your first choice, list those on an alternate choice form (available by calling 376-3000). If your first choice is closed, the registration office will select the first available choice listed and process the registration. If you do not include an alternate choice and your class choice is closed, you will be notified.
4. Mail in your registration forms, alternate choice forms (optional), and tuition check(s) made payable to the University of Minnesota. (A separate tuition check is required for each limited-enrollment class.) The address is:

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

Registrations received in the Extension registration office will be processed on a daily basis beginning with registration dates specified here and continuing through the mail registration period. Spaces in limited-enrollment classes will be filled daily.

Registrations received during mail-only registration will receive priority in processing. Once in-person registration begins, space in limited-enrollment classes also will be assigned to students who register in person.

Registrations received in the registration office before the first date of mail registration will be returned to the sender.

Students whose tuition and fees are to be billed to a company, governmental agency (including foreign governments), institution, scholarship, or the military may register by mail. See the section on **Financial Aids and Loans**, page 34

Students registering with **Regents' Scholarships** should read the section on page 37.

Persons registering with G. I. Bill assistance must include the G. I. Bill Information Sheet with their registration. See the section on **Veterans**, page 38, for further information and instructions.

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

Students who have not received fee statements three weeks after mailing in registration forms and tuition payment should call 376-3017 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).

In-person registration

1. Follow the steps outlined above in **General Registration Instructions**.
2. In-person registration dates for each term are given below. See the calendar pages, 10-19, for hours at all locations.

Fall Quarter, Semester
Winter Quarter
Spring Semester
Spring Quarter

September 5-12
December 11-19
December 11-19, December 26-February 6
March 12-20

3. **Bring your completed registration form to the tally clerk at an Extension registration office during the in-person registration period.** See locations below. For limited-enrollment classes, the clerk will tell you whether there is still space in the class. Students who register at the Minneapolis campus registration office at 101 Wesbrook Hall may check the closed-class board before bringing their registration to the tally clerk. For nonlimited classes, the clerk will check your registration form to make sure it is completed properly.
4. **Pay the Extension cashier for the full amount of tuition and fees. You are not registered until your tuition and fees are paid.** Students are urged to pay tuition with a personal check or money order. The downtown St. Paul registration booth cannot accept cash.
5. **If you reserve space in a limited class, you must pay tuition by the last day of the regular registration period for that term; otherwise, you forfeit your space in class.**
6. **Registration Offices (see maps near the end of this bulletin)**

Campus	Minneapolis	St. Paul
Extension Classes 101 Wesbrook Hall Minneapolis Campus	MacPhail Center 1128 LaSalle Ave. Downtown Minneapolis	Registration Booth Northwestern National Bank Skyway Level Downtown St. Paul

All registration offices are closed weekends.

See registration hours on the calendar pages, 10-19.

Classes may close at any time before or during in-person registration. Students who wait to register in person for limited-enrollment classes may expect to stand in line at registration offices but have no assurance of obtaining space in classes they desire.

Students are urged to register early by mail.

Sample course description

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

¹ ² ³ ⁴ ⁵ ⁶
 ★Psy 5141 **PSYCHOLOGY OF WOMEN.** 4 degree credits, \$154 (◆\$77)
 Psychological and physical sex differences, stressing developmental and environmental influences on dependency, aggression, achievement innovation, and achievement. Sex roles and sexuality during life phases. (Prereq 1001. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Fall Qtr **Sec 1** **T—6:20-8:50, WullH 230, Schletzer**
 8 9 10 11 12

1. Star indicates limited-enrollment class (or limited section when preceding a section number)
2. Department designation and course number (a "C" after the number indicates certificate course)
3. Course title (titles in red indicate classes with limited enrollment)
4. Number and type of credit (i.e., degree, certificate, or no credit)
5. Tuition cost
6. Cost for nontranscript, noncredit registrants (not all classes are open to noncredit registration)
7. Course content (including prerequisites, limits, and special information)
8. Term
9. Section number
10. Day and time (times are p.m. unless indicated a.m.)
11. Building and room
12. Instructor's last name (if determined); see faculty list for title

Alternate choice forms

Students who are registering by mail are urged to submit an alternate choice form (available by calling 376-3000) or a note listing acceptable alternative sections or courses. If the class the student is trying to register for is closed, the Extension registration office will select the first available choice listed on the alternate choice form and process the registration.

Closed classes

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

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. Starting the second week of the term late registrations will be assessed the appropriate late fee. Registrations mailed in are effective the date of the postmark.

Some departments have a strict policy against exceeding class limits. A note appears near the beginning of the department's course listings for those departments which do not admit students to classes that have closed.

Early registration permission

Extension students who are nearing the completion of their degree or certificate program and are having difficulty getting registration space in a required course may obtain special permission to register early.

Submit a written request for permission to register early, along with transcripts of all work taken, to Extension Counseling, University of Minnesota, 314 Nolte Center, 315 Pillsbury Drive S.E., Minneapolis, MN 55455. This request must be made at least three weeks prior to the start of mail registration for the term in which the student wishes to register. The counseling office will notify the student by mail regarding the action taken and how to complete registration if permission is granted.

Reopening day (limited classes only)

When a class limit is reached, the class is closed and registrations received after that point are returned to the sender. Sometimes, space becomes available in closed classes because students cancel classes shortly after registering or because they do not pay tuition or complete registration. After registration periods end and registrations are processed, classes that closed will be reopened to registration if space is available. In 1984-85, the reopening day is the last regular working day before classes begin for each quarter and semester. See the calendar pages 10-19; reopening day is identified for each term. Registration on reopening day is on a first-come, first-served basis in person at 101 Westbrook Hall only.

Late registration and additions

All registrations, whether initial or added, received either in person or by mail (effective the date of the postmark) after the close of the official registration period as designated in the **When and How to Register** section of this *Bulletin* will be considered late registrations and

will be subject to late fees based on the following schedule:

Through the first week of classes	\$ 5 (if accepted)
From the second week of classes until the final two weeks of the term	\$10 (if accepted)
During or after the final two weeks of any term	\$20 (if accepted)

All registrations made after any quarter or semester class has met twice must be accompanied by the written permission of the instructor.

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.

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

Those students registering late for Informal Courses (see page 470) or Continuing Education for Women noncredit courses (page 441) must pay a \$5 late fee.

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

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

Courses at neighborhood centers

For information about classes being held off campus at neighborhood locations, see the section beginning on page 628.

Students cannot register in person at neighborhood centers.

Students should register by mail for classes held at neighborhood centers.

Classes with enrollment limits often fill before in-person registration begins. See mail registration instructions, page 22.

Some schools are closed for energy weeks or holidays; classes will meet on campus when neighborhood centers are closed.

Students may pick up registration materials at these neighborhood center offices.

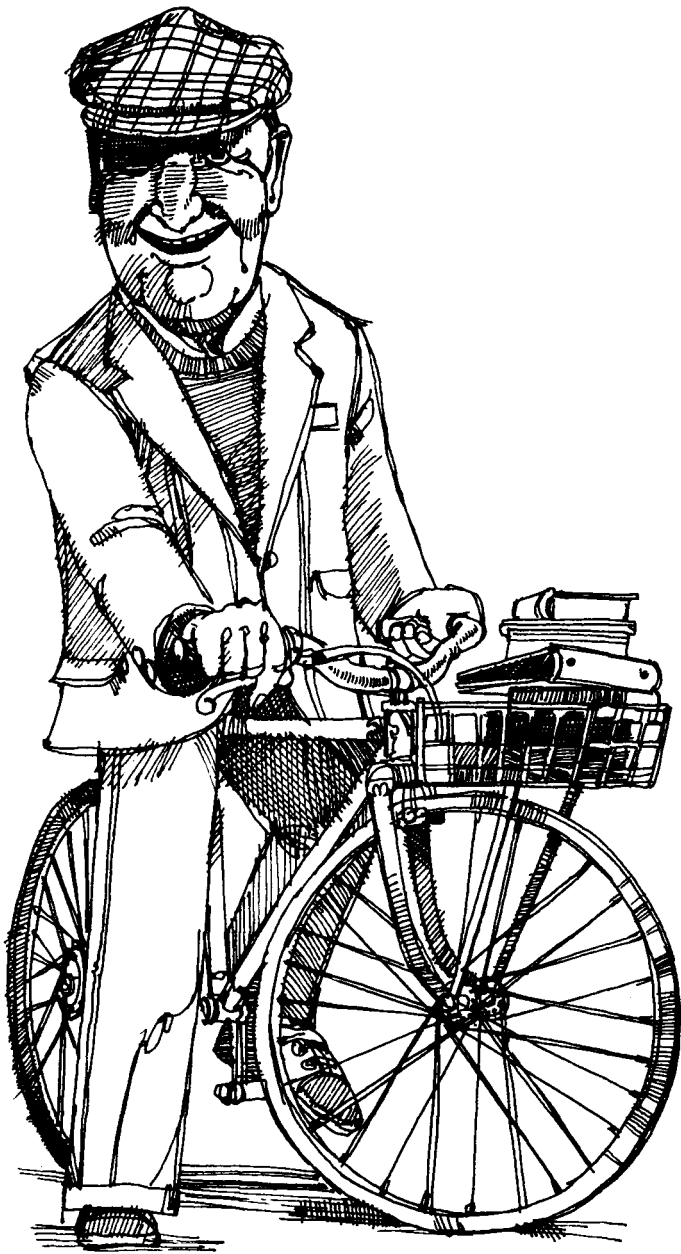
Richfield Community Education Center, 7001 Elliot Avenue South, Richfield, Minnesota 55423.

Robbinsdale Community Center, 4139 Regent Avenue N., Robbinsdale 55422.

Minnetonka School District Administration Building, Community Services Office, 261 School Avenue, Excelsior, Minnesota 55331.

Fairview Community School Center, 1910 W. County Road B, Roseville, Minnesota 55113.

Edgewood Community Center, 5100 N. Edgewood Drive, St. Paul, Minnesota 55112.



Office Hours

Regular office hours, special office hours, and holidays and other days when offices are closed are listed below. Dates and hours for registration periods are given on pages 10-19.

Campus office

(minneapolis campus, east bank)
101 Westbrook Hall, University of Minnesota, 77 Pleasant Street S.E.
Minneapolis, MN 55455 (373-3196)

Summer 1984

Regular hours

June 11-July 20
Monday through Thursday8 a.m. to 6:30 p.m.
Friday8 a.m. to 4:30 p.m.
July 23-September 5
Monday through Friday8 a.m. to 4:30 p.m.

Holidays

July 4 (Independence Day)closed
September 3 (Labor Day)closed

Closed weekends

Fall 1984

Regular hours

September 20-December 8
Monday through Thursday8 a.m. to 8 p.m.
Friday8 a.m. to 4:30 p.m.

Special hours and closings

September 5-12 (in-person registration)
Monday through Thursday12 noon to 8 p.m.
Friday12 noon to 4:30 p.m.
September 13-14 (registration processing)closed
September 17-1812 noon to 8 p.m.
September 19 (reopening day for closed classes)8 a.m. to 4:30 p.m.
December 11-19 (winter in-person registration)
Monday through Thursday9 a.m. to 8 p.m.
Friday9 a.m. to 4:30 p.m.
December 20-21 (registration processing)closed
December 26-28, January 2-58 a.m. to 4:30 p.m.

(continued next page)

Holidays

November 22-23 (Thanksgiving holidays)	closed
December 24-25	closed
December 31-January 1	closed

Closed weekends

Winter 1985

Regular hours

January 7-March 29	
Monday through Thursday	8 a.m. to 8 p.m.
Friday	8 a.m. to 4:30 p.m.

Special hours and closings

March 12 to 20 (spring in-person registration)	
Monday through Thursday	9 a.m. to 8 p.m.
Friday	9 a.m. to 4:30 p.m.
March 21-22 (registration processing)	closed
March 25-29 (spring semester recess)	regular hours

Holidays

March 25 (winter holiday)	closed
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Closed weekends

Spring 1985

Regular hours

April 1-June 15	
Monday through Thursday	8 a.m. to 8 p.m.
Friday	8 a.m. to 4:30 p.m.

Holidays

May 27 (Memorial Day)	closed
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Closed weekends

MacPhail office

(downtown minneapolis)
1128 LaSalle Avenue, Minneapolis, MN 55403 (373-1925)

Registration hours at MacPhail are not the same as regular office hours shown below; see pages 10-19 for registration dates and hours.

June 4 to August 24	
Monday through Friday	8:30 a.m. to 4:30 p.m.
August 27 to June 7	
Monday through Thursday	8 a.m. to 7 p.m.
Friday	9 a.m. to 5 p.m.
Saturday (registration office closed)	8 a.m. to 3 p.m.

Counseling department

(minneapolis campus, east bank)
314 Nolte Center, University of Minnesota, 315 Pillsbury Drive S.E.
Minneapolis, MN 55455 (373-3905)

Monday through Friday	8 a.m. to 12 noon 1 p.m. to 4 p.m.
Evenings (Monday through Thursday)	by appointment

Bookstores

The evening schedule listed on the next page has been established by University bookstores. **Note that bookstores are not open every night. Bookstores do have special hours early in the term. See the pages which follow for information.**

The **Minnesota Book Center**, on the East Bank campus, is located in Williamson Hall between Nolte Center and Jones Hall.

Books Underground is the St. Paul campus bookstore. Enter through the Student Center or Coffey Hall.

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.

Special Arrangements for Book Pick-up—Arrangements may be made to send books between the St. Paul campus and Minneapolis campus bookstores.

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

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

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

Minnesota Book Center (Williamson Hall, East Bank)

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

Telephone 373-3688

Special hours:

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

(Additional hours by faculty appointment.)

Regular hours:

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

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

10 a.m.-2 p.m., the Saturday before each quarter begins, and the first three Saturdays of each quarter.

Harold D. Smith bookstore (West Bank)

The West Bank Bookstore, located next to Anderson Hall, sells books for courses in the School of Management, as well as for these College of Liberal Arts departments: history, political science, geography, sociology, Afro-American and African studies, American Indian studies, theatre arts, studio arts, economics, public affairs, urban studies; and family social science courses taught on the West Bank campus.

Telephone: 373-4450.

Special hours:

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

(Additional hours by faculty appointment.)

Regular hours:

8 a.m.-5:30 p.m., Monday, fall through spring.

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

10 a.m.-2 p.m., the Saturday before each quarter begins, and the first Saturday of each quarter.

Books Underground Bookstore (St. Paul campus)

Books Underground sells books for courses taught on the St. Paul campus.

Telephone: 373-0800

Special hours:

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

8 a.m.-6:30 p.m., Tuesday only during the first week of Winter and Spring Quarters, and Spring Semester.

(Additional hours by faculty appointment.)

Regular hours:

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

Health Sciences Bookstore (2-554 Moos Health Science Tower)

The Health Sciences Bookstore 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.

Telephone: 376-4007

Special hours:

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

Regular hours:

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

Enrollment Information

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Enrollment into Extension Classes

Credit courses through Continuing Education and Extension 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 discipline granting the credit. Courses are expected to have the integrity and legitimacy of campus-based day classes offered for equivalent credit.

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

Registration in specific programs or classes may require prerequisite courses or experience. (See **Prerequisites**, page 41.)

Students wishing to register for graduate school credit, refer to page 44.

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.**

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

(Offered before 4 p.m.)

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.

Check the **Course Offerings** section of this bulletin for departments that will offer joint day/Extension classes this year (a note appears boxed near the beginning of the department's course listings). The day school *Class Schedule* contains a list of day school classes for which students may register through Extension each quarter.

Call 376-3000 two weeks before mail registration begins each quarter to request a copy of the daytime *Class Schedule*, and procedures for registering in day school classes through Extension.

Joint day/Extension classes that begin at 4 p.m. or later are listed in this bulletin; the symbol **⓪** appears before the course number. Registration is the same as for regular Extension classes.

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

Counseling and program advising

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

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

Counseling—Professional counseling and testing services are available to Extension students who want to learn more about their own abilities, interests, and personalities; and who wish help in educational and vocational planning or choosing a major field of study; and who seek help with problems affecting their academic performance. A fee of \$76 is charged for students and prospective students (\$115 for nonstudents) wishing to take a battery of tests. Appointments must be made in advance.

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

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

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

All *College of Liberal Arts* students should first see advisers in 314 Nolte Center. When appropriate, students will be referred to their college offices.

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

Tuition and fees

Tuition and fees are subject to change without notice.

Tuition for each course is listed after the course title. Any course fees or special fees, required in addition to the tuition, are listed, also. The cost per credit varies depending on the level of the course and the tuition rate for the college. In the **Course Offerings** section of this *Bulletin*, departments are listed alphabetically, and the college that the department is a part of is listed below the department name. For 1984-85, tuition rates follow the range given below.

\$37.00 a credit For all 1000-level courses, certificate courses, entrance credit courses, noncredit courses (does not necessarily apply to reduced-tuition courses).

\$37.50 to 62.00 a credit For 3000-level and 5000-level courses; per credit rate depends on tuition of the college offering the credit.

\$85.00 a credit For 8000-level courses (open only to students admitted to the University of Minnesota Graduate School).

Tuition and fees are subject to approval by the Board of Regents.

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.

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

Students registering for graduate credit pay CEE tuition rates. However, when course work is transferred to the Graduate School record the student will be charged the difference, if any, between CEE and Graduate School tuition for credits accepted on the program. The tuition difference to be charged will be the difference between the rates in effect at the time the course work is transferred.

A \$10 handling fee is charged for all checks returned by a bank. Students should contact the cashier at 138 Wesbrook (376-7243) if they have received notification from their banks that a check has been returned to Extension Classes.

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

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

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

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

Enrollment verification

Students who need enrollment verification (for bank or business purposes) for the current term should bring the paid fee statements to 101 Wesbrook Hall. Students who need verification for past terms should go to the Certification and Transcript Service, 150 Williamson Hall. Full-time students carry 12 or more credits; three-fourths time, 9 credits; half-time, 6 credits; less than half-time, 5 credits or less.

Verification can be made only for *enrollment* in Extension classes, **not** for attendance or grades. Duplicate fee statements are available in 101 Wesbrook Hall; transcripts at the Certification and Transcript Service, 155 Williamson Hall.

Loan deferments must be left at or mailed to 101 Wesbrook Hall, 77 Pleasant St. S.E., University of Minnesota, Minneapolis 55455, and they will be returned by mail.

Financial aids and loans

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 373-0056, on the Minneapolis campus. If registering by mail, authorizations must include the following:

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

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

Registration forms and authorizations must accompany each other. If your authorization is

already on file, you **must** include a note with your registration indicating the source of your authorization, or your registration will be returned.

All materials should be sent to 101 Wesbrook Hall.

Registration forms must be properly filled out.

Tuition deferments

Only students receiving financial aid through the University of Minnesota are eligible for tuition deferments. After the second week of the term, tuition deferments for that term will not be accepted.

A copy of an award letter, Pell Grant Student Aid Report, or letter from the Office of Student Financial Aid, 210 Fraser Hall, stating that the student will receive funds during the quarter for which he or she is registered always must accompany the student's registration forms. (A letter documenting the student's financial aid assistance is required each quarter that a student requests a deferment; files are not maintained in Extension Classes.)

Students requesting tuition deferments should register during regular registration periods to avoid late fees.

Students with tuition deferments are responsible for tuition and fees once they receive the deferments. A student who never attends class or stops going to classes (1) must officially cancel at 101 Wesbrook Hall, and (2) must pay that part of the tuition and fees that would not be refundable based on the refund policies described on page 55. Students are urged to cancel as soon as they decide to stop attending class and to drop the course. In most cases, without official cancellation, students would be responsible for the the total course costs after the fourth week regardless of whether they have been attending class or intended to cancel.

Programs

Military personnel should read the listing on pages 38-41.

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

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 Part-Time Student Grant Program—An eligible student is one who, prior to applying, has established at least a one-year residency in Minnesota for purposes other than that of obtaining an education and is a permanent resident of the United States; has maintained good academic standing and *has been formally admitted to a recognized degree or certificate program* on less than a full-time basis; is not eligible for, or receiving, any other educational grants or scholarships (with the possible exception of Pell Grant); and can demonstrate financial need which is within the guidelines established by the Higher Education Coordinating Board. Financial need criteria are based on the previous year's income (1983 income for the 1984-85 academic year) or, under some circumstances, on the estimated present year's income. Applicant's total federal adjusted gross income and nontaxable income must not exceed the following levels: one-person family—\$9,400; two-person family—\$12,900; three-person family—\$16,000; four-person family \$19,875; five-person family—\$21,375; six-person family—\$22,950; seven-person family—\$24,700; eight-person family—\$26,375; nine or more—\$28,300. Awards will not exceed the amount of tuition and fees. **Check with Extension Counseling, 314 Nolte Center (373-3905) if you are in doubt about what admission to a degree or certificate program entails. Simply registering for and attending classes does not mean that a student has been officially admitted.** Applications will be accepted until all funds for each term have been committed or until late fees begin, whichever comes first. Information is available at Extension Counseling, 314 Nolte Center, 315 Pillsbury Drive S.E., Minneapolis, MN 55455 (373-3905).

Tuition Assistance Program—Tuition scholarships are available under the CEE Tuition Assistance Program for low-income adults who wish to attend Extension classes and are not eligible for other financial aid programs. Tuition assistance covers full tuition for a maximum

of two classes a quarter or semester. Eligibility is based on current monthly income, number of dependents and special expenses. Applications will be accepted until all funds for each term have been committed or until late fees begin, whichever comes first. Information available at Extension Counseling, 314 Nolte Center (373-3905).

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

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

Esther Friedman Remington is a valued friend of CEE.

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

Business Scholarship—One scholarship amounting to \$300 will be awarded to an Extension student working on a business-related certificate or degree program during the 1984-85 academic year. Applicants must be admitted to a degree or certificate program and must demonstrate financial need and above-average scholastic achievement. Applications will be considered in July. For an application, write to the Extension Counseling Office, 314 Nolte Center, 315 Pillsbury Drive S.E., University of Minnesota, Minneapolis, MN 55455, or telephone 373-3905.

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 Vocational Rehabilitation: Some financial aid help may be available through the Minnesota Division of Vocational Rehabilitation. For information, contact the Office of the DVR Liaison, 12 Johnston Hall (376-2728); or the Division of Vocational Rehabilitation office in your area outside the Twin Cities can also supply you with information.

Blind students may call the Extension registration office (373-0056) concerning tuition exemption for Extension classes. Counseling regarding other financial assistance is available through the Minnesota State Services for the Blind and Visually Handicapped, 1745 University Avenue, St. Paul, MN 55104 (296-6090). Tape and braille materials also are available from the Communication Center of State Services for the Blind, telephone 296-6723.

Special Funds: Students with disabilities may contact the Office for Students with Disabilities in 12 Johnston Hall (376-2716) 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 Veterans Administration. Write or call the Veterans Assistance Center, Room 181 Federal Building, Fort Snelling, St. Paul, MN 55111 (726-1454).

Guaranteed Student Loan (GSL)—Regulations for the GSL could change considerably for the 1984-85 academic year. At the time of printing, the following information applied. Under the GSL program, a student registered for at least six credits a quarter may borrow from a participating bank, savings and loan institution, the state of Minnesota, or other lending institution. Students should not apply for a GSL unless they are ineligible for other forms of assistance or unless such other assistance will be inadequate. Borrowers must be U.S. citizens, permanent residents, or refugees from Southeast Asia or the U.S.S.R. Loan limits are \$2,500 a year for undergraduate students with a cumulative maximum of \$12,500. Some lenders and guarantors have lower academic year limits; e.g., the state of Minnesota as a lender may not loan over \$1,500 to those with fewer than 45 credits, nor more than 50% of

costs. Interest for new borrowers is 8%. The federal government pays this interest until repayment begins (6 months after becoming less than a half-time student or graduation). Processing of the loan application takes considerable time, so students should apply 3 to 4 months before the funds are required. Application materials, except for certain non-Minnesota state-affiliated programs (e.g., Wisconsin State Loan Program), are usually available at the Office of Student Financial Aid, 210 Fraser (376-2424). Recommendations for Guaranteed Student Loans based on cost of attendance and other funds received will be made by Student Financial Aid. The application is submitted first to the Office of Student Financial Aid for preliminary processing, then submitted to a participating lending institution. GSL applications for fall, winter, and spring quarters of the 1984-85 academic year will be accepted through January 31, 1985. **Exception:** students new to the University as of spring quarter 1985 may submit applications until April 15, 1985.

For further information, telephone 376-2424 or 373-3905.

Pell Grant (formerly BEOG)—The Pell Grant is a federal aid program designed to provide financial assistance to part-time or full-time undergraduate students with high financial need. The maximum award available to a student for full-time attendance in Extension is approximately \$1,625. The amount of the grant is based on the family contribution, the amount of funds available for the program, and the cost of education at the institution of attendance, since the grant cannot exceed one half of that cost. Students must be registered for at least 6 credits a quarter. Pell applicants must be U.S. citizens, permanent residents, or refugees from Southeast Asia or the U.S.S.R. Those who have a bachelor's degree are not eligible. *Independent Study (correspondence) courses are not covered by Pell funds. Recipients must be admitted to a degree or certificate program and be in good academic standing in order to receive funds. Simply registering for and attending classes does not necessarily mean that a student has been officially admitted.* If in doubt, students should check with Extension Counseling, 314 Nolte Center (373-3905). Applicants should allow 12 to 15 weeks for the Pell application process (from submitting the application to receiving a check). Applications are available at Student Financial Aid, 210 Fraser (376-2424), or they may be picked up at the Extension Counseling Office or at most public libraries. Call Extension Counseling for a set of procedures outlining the steps which must be followed. Procedures are revised yearly, or when the need arises.

For further information, telephone 373-3905 or 376-2424.

Bank loans—Students should be aware that most banks in the Twin Cities area offer a "line of credit" service to handle small, intermittent loan needs. Plans vary among banks, but 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' Scholarships—University civil service and bargaining unit employees working at least 75% time are eligible to apply for Regents' Scholarships through the Personnel Department. Regents' Scholarships cover only tuition for approved classes. All course fees, special fees and late fees must be paid by the student. Further information about eligibility and application procedures can be obtained from the Personnel Department, Room 220, Administrative Services Center, 1919 University Ave., St. Paul. Telephone 373-4366.

Students registering with Regents' Scholarships for nonlimited-enrollment credit courses may register beginning the first day of mail registration. An approved authorization for each class must accompany the registration forms. (Late fees go into effect at the end of the in-person registration period and are the student's responsibility.) **Students wishing to register by mail for limited-enrollment credit classes with Regents' Scholarships may do so beginning the second week of mail registration and thereafter.** Students are urged to use U.S. mail rather than campus mail. Students may obtain space during in-person registration dates, also. See the **When and How to Register** section for the dates and hours of each registration period. Be sure to include a separate approved Regents' Scholarship form for each class, completed registration forms, and a check made payable to the University of Minnesota for special, course, or late fees (*if any*), when registering by mail. **No refunds will be given to students wishing to apply Regents' Scholarships toward limited-enrollment classes for which they have already registered and paid fees.**

University employees who wish to take noncredit Informal Courses and noncredit Continuing Education for Women courses must pay one-half the regular tuition plus all course fees and special fees given with a course. You must submit a letter from your department head verifying employment when you register. For registration details, see the introductory information preceding the Informal Courses listing and the Continuing Education for Women listing in the Noncredit Course Offerings section.

Regents' Scholarships are not accepted for MacPhail Center Courses and Professional Improvement Courses and Seminars.

Other Financial Aids—Extension students who have questions or problems regarding financial aid can call Extension Counseling, 314 Nolte Center (373-3905). For information about day school financial aid, call 376-2424. Students who plan to attend day school and need financial aid should plan well in advance. Fall quarter day students should apply for aid on the ACT application on January 1 (or as close to January 1 as applications become available). ACT applications can be picked up at the Extension Counseling Office, 314 Nolte Center, or at Student Financial Aid, 210 Fraser.

Military information

Personnel

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

All branches of the Armed Services now provide Off-Duty Academic Instruction or Tuition Assistance Programs for military personnel on active duty. There are no application forms necessary for admission to the Department of Extension Classes. Under these programs, eligible military personnel may be entitled to tuition assistance of 75 percent a quarter credit hour for approved classes. (All classes in the *Extension Classes Bulletin* are quarter credit whether designated quarter or semester length.) The remaining tuition and all fees must be paid by military personnel. Interested members of the Armed Services are urged to contact the educational officer or commanding officer of their command for proper authorization to participate in these programs. Written authorization designating classes and amount of tuition to be paid by Army, Navy, Air Force, or Marine Corps should be presented at time of registration, at which time payment of remainder of tuition must be made. Military personnel who do not have the necessary authorization at the time of registration will be required to pay in full for their registration. When the government authorization is received, a refund for the authorized amount will be made. Registration must be made in person at 101 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 a counselor at the Extension Counseling Office before registering if they have not previously reviewed educational plans and transcripts of all college work with a counselor.** Call 373-3905 to make a day or evening appointment.

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

Application for training under this bill may be made by requesting VA Form 22-1990. The application form must be completed and submitted to 101 Wesbrook with a certified copy of

DD 214 (discharge papers) and information sheet when registering for Extension Classes. In-person registration is encouraged for those veterans registering for the first time under the G.I. Bill.

Registration—Before registering, please read pages 20-25 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.

Each time a veteran registers for Extension Classes and wishes certification to the Veterans Administration, a G.I. Bill Information Sheet must be completed. Call 376-3000 to request copies of the G.I. Bill Information form. Please complete **only one** information sheet for each registration period. (Fall quarter and semester are considered **one** registration period.) If the student registers by mail for limited-enrollment classes and any of these classes has closed, the G.I. information sheet will be returned and must be revised. Veterans who wish to add classes to their registration should return the corrected information sheet along with the additional registration forms and payment. Those who do not wish to add classes to their registration should return the corrected information sheet to 101 Wesbrook Hall along with a note indicating that registration is completed and certification to the Veterans Administration should be made. **In either case, if the veteran does not return the information sheet, no certification will be made to the Veterans Administration.**

Complete only one G.I. information sheet (listing on it all the courses you are registering for that term). Do not complete a separate G.I. information sheet for each class. However, be sure to write separate checks to pay tuition and fees for each limited-enrollment class for which you are registering. Submit all documents together when registering (registration forms, tuition checks, and one completed information sheet).

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

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

MINIMUM CREDITS	DEPENDENTS				
	None	One	Two	Three	Four
Full Time 12	\$342	\$407	\$464	\$493	\$522
¾ Time 9	257	305	348	370	392
½ Time 6	171	204	232	247	262

Less than half-time—Reimbursement of tuition and fees only.

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

Certification for Certificate Programs—Effective January 1, 1984, federal regulations have changed regarding student veterans claiming benefits under a certificate program. Two new requirements affecting certification of enrollment and payment are:

1. **Attendance**—Instructors must sign a weekly University form to attest to daily attendances and absences.
2. **Clock hours per week**—Payments are based on the number of clock hours and not by the number of credits. Clock hours are determined by the total hours of class

enrollment as listed for each course in the Extension bulletin. Courses with times "arranged" must be documented in a letter from the instructor stating the hours the student was in attendance in the class. The letter must be submitted with the attendance form in order for the student to be certified. Minimum clock hours per week required for full-time certification are 22; for ¾ time, 16 hours; for ½ time, 11 hours. For classes meeting 10 hours or fewer per week, only tuition and fees will be paid.

Extension Classes can issue the necessary forms on request at 101 Wesbrook Hall or by calling 373-5777.

For possible changes or further advising regarding this regulation, contact the Extension Counseling Office, 373-3905.

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 the Veterans Office, 101 Wesbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis, MN 55455, or by filing in person at this office. Requests cannot be made later than 30 days prior to the start of classes, nor earlier than 120 days before classes begin. Students who are registering for classes (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 advance pay for each term when registering by mail:

Fall Quarter: August 6, 1984
Fall Semester: August 6, 1984
Winter Quarter: November 12, 1984
Spring Semester: November 12, 1984
Spring Quarter: February 11, 1985

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

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

Satisfactory Academic Progress—In the past, 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 to define satisfactory academic progress:

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 next 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:

Extension Classes G.I. Certification:	373-5777
Day School G.I. Certification:	376-1804
Independent Study G.I. Certification:	373-3256
Program Counseling:	373-3905
<i>(necessary course work—degree planning)</i>	
Unsatisfactory Progress Problems:	376-1805

Tutorial assistance—Veterans enrolled under the G.I. Bill 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 \$76 a month. No charge will be made against the student's basic entitlement to educational assistance for any tutorial assistance received. Eligible students should contact the Extension Counseling Office, 314 Nolte Center (373-3905).

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).

State of Minnesota—Department of Veterans Affairs—Minnesota law provides that educational assistance will be granted to veterans not to exceed \$350 once, for the payment of tuition of honorably discharged veterans who entered the service from the state of Minnesota. This allowance is made to assist them in completing their educational objective after they have exhausted federal G.I. Bill benefits by actual use. Only Minnesota schools are permitted under this program.

In each instance veterans must show evidence of acceptable passing grades together with the fact that they are pursuing their original educational objective or what may be considered normal progression. The claimant's financial status will be evaluated.

War Orphans Educational Assistance—Minnesota law also provides that the Department of Veterans Affairs may offer \$350 a year to qualified war orphans who are attending institutions of higher learning or trade schools beyond high school and who maintain passing grades. Only Minnesota schools are permitted under this program. To qualify, students must have lost their veteran parent through death because of a service-caused condition. The veteran must have been a resident of the state of Minnesota at the time of entry into service, and the child must have resided within the borders of the state for two years prior to commencing his or her educational program. Children of veterans eligible for benefits shall be admitted to state institutions of college grade free of tuition (this does not include the University of Minnesota). The \$350 allowance may be used for tuition (where applicable), fees, board, room, books and supplies, and other legitimate expenses.

In addition, it will be necessary to show that reasonable need exists. The rules and regulations of the department stipulate that no child may have over \$7,500 in liquid assets. Inquiries should be directed to the 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 **Transferring Classes, 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.

Grades

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

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

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

Choice of A-N or S-N grading system must be indicated for each course listed on the registration form at the time of registration, **and may not be changed after the second week of a quarter or the third week of a semester (there is no fee for changing)**. For 8000-level courses only, students may change grading systems at any time with instructor's permission. For all other courses, instructors are **not** authorized to change students' grading systems. Changes can be made in person or by writing the Department of Extension Classes, 101 Wesbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis, MN 55455 (telephone calls are **not** acceptable). **If the student does not specify on the registration form the grading system desired, the A-N system will apply.**

A symbol of I (incomplete) will be assigned when, in the opinion of the instructor, there is a reasonable expectation that the student can complete successfully the work of the course. Student and instructor should arrive at a clear understanding in advance as to whether the student may receive an I and what the conditions will be. An I that is not made up by the end of one year becomes an N. When an I is changed to a permanent grade (within the one-year period), the I is removed from the student's record. Veterans are advised to read information under **Satisfactory Academic Progress**, page 40.

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

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

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

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

Grade reports and transcripts

Extension students can secure transcripts showing all credits earned in Extension Classes from the Office of Registration, Student Records, and Scheduling, 155 Williamson Hall, 231 Pillsbury Drive S.E., University of Minnesota, Minneapolis, MN 55455. No requests will be accepted by telephone.

Students may pick up a limit of one free **unofficial transcript** over the counter (stamped "issued to student"). Hours are 8 a.m. to 6:30 p.m. Monday and 8:00 a.m. to 4 p.m. Tuesday through Friday. Hours are subject to change.

Official transcripts, specially certified and embossed with the University's seal, cannot be given over the counter but are mailed. A \$2 check or money order (do not send cash) is required for each request.

Students must supply the following information when requesting Extension transcripts: complete name, birth date, social security number, and the last dates in attendance. The name(s) and number(s) of the course(s) last attended should also be included with the request.

Extension grades are not automatically recorded on regular college (day school) transcripts. Students must request that the grades be transferred. See **Recording Credits**, page 44.

Official quarterly reports of students' grades are released only by the University's Office of Registration, Student Records, and Scheduling and cannot be furnished by the Extension offices. Grades for each quarter or semester are mailed from the Records Office. Students should allow six to eight weeks from the close of a term for their grades to arrive in the mail. Students who need grades sooner may leave self-addressed postcards with their instructors, who will mail grades to them immediately following the end of the term.

Student identification card (I.D.)

An Extension Student *admitted* to a college of the University of Minnesota is eligible for a University student identification card. A student who *is not admitted* to a degree program is not eligible for the I.D. card. For further information, telephone Extension Counseling (373-3905).

Credit and no credit registrations

Credits

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

1. **"Degree credit"** means that the credits earned in a course so designated will 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 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 residence requirements of individual colleges of the University. See University Degree Programs, page 555.

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 University Certificate Programs, page 579.
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).

Recording Credits—Credits earned in Extension are entered initially on an Extension record. Students who are admitted to a degree program and who want to have credits earned in Extension classes put on their college transcripts should submit a request to the Office of Registration, Student Records, and Scheduling, 150 Williamson Hall, 376-1680, to have their credits transferred. Credits are not automatically transferable for all students; some colleges place restrictions on the transfer of credits earned in Extension to degree programs. Check with your college office or call 376-1680 for information. A student planning to have credits earned in Extension transferred to another institution should request that the Office of Registration, Student Records, and Scheduling forward a transcript to that institution. Such requests are accepted by mail or in person, but not by telephone. See **Grade Reports and Transcripts**, page 43.

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.

Graduate School credit

A course numbered with an initial digit of "5" may be taken for graduate credit by qualified students if the course description includes a statement indicating that graduate credit is available.

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

Students intending to pursue graduate work through Continuing Education and Extension (CEE) should be familiar with the instructions in this *Bulletin* and in the Graduate School Bulletin which may be requested from the Graduate School, 307 Johnston Hall, 101 Pleasant Street S.E., University of Minnesota, Minneapolis, MN 55455 (373-5542).

Students registering for graduate credit pay CEE tuition rates. However, when course work is transferred to the Graduate School record the student will be charged the difference, if any, between CEE and Graduate School tuition for credits accepted on the program. The tuition difference to be charged will be the difference between the rates that are in effect at the time the credits are transferred.

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

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

The Master of Arts in English and the Master of Business Taxation (Graduate School programs) may be completed entirely through Extension. The Master of Agriculture in Food Technology (administered through the College of Agriculture) may be completed almost entirely through Extension. The Master of Arts in Speech Communication (Graduate School) and the Master of Agriculture in Technical Communication (College of Agriculture) can be completed by a combination of late afternoon and evening classes.

In other graduate programs leading to the master's degree (administered through the Graduate School), graduate students are required to have registered through the Graduate School for at least 60% of the course work on their official master's degree programs.

1. Up to 40% of the course work on the official master's degree program may be completed as an adult special, summer special, or Continuing Education and Extension registrant at the University of Minnesota; or the work may be transferred from other accredited graduate schools (any combination of course work, up to 40% of the program, is acceptable from the sources listed above).
2. Course work being transferred must have been taken for graduate credit and taught by faculty members authorized to teach graduate courses.

Such requests for transfers are subject to early review and recommendation by the student's graduate adviser and the Director of Graduate Studies. *Individual graduate programs may, at the department's option, specify more rigorous requirements.*

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

Doctoral students should consult the Graduate School Bulletin for the current policy on transfers.

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

In order to change from undergraduate credit 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 quarter. For students who wish to change to graduate credit after completing a course, the instructor must approve the change and submit a change-of-grade report indicating the student has earned graduate credit.

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

Credits without class attendance

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

Independent study "Y" registration

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

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

Extra credit "X" registration

Students may register in a degree credit course for 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 the Counseling Department, 314 Nolte Center (373-3905).

Directed studies, Directed research registration

A wide range of opportunities is available to Extension students for earning college credit for individually designed study or research projects. These projects may be organized around their job activities, their involvement in the community or around special interests that students have in a particular topic. A student wishing credit in Directed Studies or Directed Research should contact a faculty member in the particular area in which he or she is interested, determine if the department lists specific course numbers and titles for such

registration, and obtain faculty and department approval. A special form for that purpose, with the appropriate signatures, must be presented at time of registration. Registration is then completed in the usual manner with the correct Directed Studies or Directed Research number of the department. For the special permission form and assistance in making Directed Studies or Directed Research registration, consult the Counseling Department, 314 Nolte Center (373-3905).

Special examination

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

College-Level Examination Program (CLEP)

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

University College independent study (UC 3075)

University College provides an undergraduate independent study course listing (UC 3075) 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. Further information may be obtained from the Inter-College Program Office of University College, 213 Temporary North of Appleby (376-1253).

Independent study

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

You may pay tuition and fees for Independent Study courses by Visa or MasterCard.

Correspondence courses

More than 375 correspondence courses, both introductory and advanced, are available through Extension Independent Study. The correspondence method is uncomplicated, and a comprehensive study guide for each course coordinates your reading and study. You prepare assignments for evaluation at your own pace and have a year to complete the course. With your self-motivation and the guidance of a University faculty member, you can earn University resident credit in your home.

Media-assisted courses

Television and Radio Independent Study bring University of Minnesota credit courses to the community. These media-assisted independent study courses consist of television or radio programs, study guides, and textbooks. Television programs are broadcast on KTCA (Channel 2, Twin Cities) and some other channels, including cable, in Minnesota. Radio programs are broadcast on the University radio station KUOM (770 AM) and some other stations in Minnesota. Study guides for these courses are available for purchase by noncredit viewers and listeners. After broadcast, media-assisted courses continue to be available with programs on video or audio cassette tapes. All course requirements can be completed by mail. For information, contact the Department of Independent Study, 45 Wesbrook Hall, 77 Pleasant Street S.E., University of Minnesota, Minneapolis, MN 55455; telephone (612) 376-4925.

Auditors (no credit)

A student who wants to attend classes, but does not wish to do all the required work, may register as an auditor by placing an "X" in the appropriate box on the registration form. An auditor is expected to attend class. Auditor status carries no credit. One may not later take for credit a course which has been audited; exceptions to this rule may be allowed upon consultation with an adviser in the college or school concerned. Auditors pay the same tuition and fees as other students. 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 Wesbrook Hall, University of Minnesota, 77 Pleasant Street S.E. Minneapolis, MN 55455 (373-3195). After the sixth week of a quarter class or the ninth week of a semester class, requests for change must be approved by the instructor; approval is granted only if the student is doing passing work at the time of the request. No changes can be made during the last two weeks of any term. No student whose tuition and fees are paid in whole or in part by military, Veterans Administration, company or scholarship funds may register as an auditor. Changes from audit to credit will not be allowed after the second week of the quarter or third week of the semester.

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

Reduced-tuition plans (no credit)

◆ **Half-price plan**— Regular Extension credit courses marked with a diamond (◆) symbol (listed in parentheses after regular tuition cost) are open for no-credit registration at half tuition (students must pay course fees, special fees, and late fees, however). Joint Day/Extension offerings are **not** available for half-price registration.

Registration dates (pages 10-19) and procedures (page 20-25) for ◆ courses are no different than for any nonlimited-enrollment credit class.

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

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

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

Course fees and special fees must be paid in full (except some courses have second family member discounts).

Advanced high school students who want to take Extension classes for credit should contact Darryl Sedio in the Extension Counseling Office, 373-3905.

62-Plus plan—Individuals age 62 or older may register free for no credit in regular credit classes. For further information on 62-Plus, see below. There are no late fees for persons 62 and older.

Informal Courses

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

Continuing Education for Women

Continuing Education for Women offers credit and noncredit classes in time formats and locations designed to accommodate student needs. Most credit classes meet once a week during the day at off-campus locations. Noncredit classes offer women an opportunity to continue learning in a wide variety of areas without grades, exams, or extensive homework. See the "Continuing Education for Women" section of this bulletin for a list of course titles and complete descriptions.

The Continuing Education for Women Mucke/Roff Scholarship Fund was established especially for students registering for courses through Continuing Education for Women. Awards are made on the basis of scholastic ability, motivation, previous achievement, financial need, and realistic plans. Information is available from the Extension Counseling Office, 373-3905.

Sampler Lectures, \$1 (no credit)

\$1 University Sampler lectures are scheduled fall and spring terms. These special lectures give students a taste of Extension classes for only \$1 each. University faculty, representing a wide range of fields and interests, present these lectures. Sampler titles have included:

Hives and Honeybees

Winter Birds of Minnesota

Shakespeare's Quarrel With Time

A Look at Personal Computers

The Arab-Israeli Conflict

Architecture of Minnesota

No preregistration is required for Sampler lectures. Simply pay \$1 at the door. Call 376-7500 or write to University Sampler, 180 Westbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis, MN 55455. Ask for a schedule of topics in the "University Sampler."

Persons 62 and older

Minnesota state law allows persons 62 and older to register in credit classes at reduced cost (credit registration) or no cost (noncredit 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 for only \$6 a degree, certificate, or entrance credit hour plus any fees. Or these courses may be taken free for no credit. For classes with limited enrollment (those courses with titles printed in red), registrations will be accepted starting the second week of mail registration. For information on the availability of space in limited-enrollment classes, call 373-3198 during registration dates specified on pages 10-19.

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.

For nonlimited-enrollment classes, students may register during regular registration periods by mail or in person.

Noncredit Informal Courses and Continuing Education for Women Courses: Persons 62 and older may register in noncredit Informal Courses and Continuing Education for Women courses for one-half the regular tuition cost plus any special fees or course fees. For classes with limited enrollment, registrations will be accepted starting the second week of mail registration. For nonlimited-enrollment classes, students may register during the regular registration periods.

Late fees: There are no late fees for persons 62 and older registering under the reduced tuition option.

Sampler lectures: Persons 62 and older are admitted free to Sampler lectures. No preregistration is required.

Be sure to see the sections on registration instructions and registration dates for each term at the beginning of this bulletin.

For general information, call 373-3196.

Rules Regulations Policies

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Fee statements

After registration forms are receipted (cashier), the fifth copy (pink) is a student's fee statement. The fourth copy (white) is to be presented to the instructor at the first class session. Students must **not** remove carbons or receipts from the registration form. The Extension office will do this after the form has gone through all necessary processing steps.

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

Students must be sure all copies of their registration forms are legible. If the fee statement is not legible, it cannot be returned to students who register by mail. Students who have not received fee statements three weeks after mailing in registration forms and tuition payment should call 376-3017 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).

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

Changes in course information

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

Attendance in classes

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

Transferring classes

Students who wish to transfer classes or class sections after being officially registered may do so, if space is available, either in person at 101 Wesbrook Hall, or by mail (call 373-3196 for transfer forms). No transfer by mail will be done for reduced-tuition courses. Students may not transfer between terms (except for fall quarter and fall semester, through the second week of classes).

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

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

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

Transfer During the Second Week (Quarter, Semester, Special Term, Special Class)—No transfer will be accepted after the second class meeting without written permission of the instructor of the class the student wishes to enter.

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

There will be no transfer fee if: (1) University requests transfer be made; (2) transfer is required by an unacceptable grade in prerequisite course (see **Grades**, page 42); (3) transfer is required because of University cancellation of course in which previously registered, provided such transfer is made within one week from date of cancellation of class; or (4) between sections of a course with the same course number.

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

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

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

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

Veterans—Any veteran registered under the G.I. Bill must notify the Extension Veterans Office, 101 Wesbrook (373-5777) when transferring classes. This is essential when it changes the credit load.

Transfers within the University

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

Transfers from other institutions

Students who have had university or college work other than at the University of Minnesota, and who intend to work on a degree or certificate program in Extension should contact the Extension Counseling Office, 373-3905. 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 equivalent are applicable to the degree or certificate program for which the student is applying.

Access to student educational records

In accordance with regents' policy on access to student records, information about a student generally may not be released to a third party without the student's permission. The policy also permits students to review their educational records and to challenge the contents of those records.

Some student information—name, address, telephone number, dates of enrollment and enrollment termination, college and class, major, adviser, and degrees earned—is considered public or directory information. To prevent release of such information outside the University while in attendance at the University, a student must notify the records office on his or her campus.

Students are notified annually of their right to review their educational records. The regents' policy, including a directory of student records, is available for review at the information booth in Williamson Hall, Minneapolis, and at the records offices on other campuses of the University. Questions may be directed to the Office of the Coordinator of Student Support Services, 260E Williamson Hall, (612) 373-2106.

Cancellations

How to drop a course

Students who wish to cancel a class or classes must do so officially, either in person or by writing to the Department of Extension Classes, 101 Wesbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis, MN 55455. By so doing, they will, if eligible, receive a refund (see **Refunds**, page 55), and will likewise insure entry of the appropriate symbol on their grade report. If students officially cancel the first two weeks of a term, the course they cancel will not appear on a transcript. If students officially cancel from a class before or during the ninth week of any semester, or the sixth week of any quarter, or mid-point of any special term, they will automatically receive a "W" (withdrawal) on the grade report. This symbol means "official cancellation without grade."

Cancellations after the above-stated periods require the instructor's signature on the official cancellation form. (Students must be doing passing work to receive a "W" after the midpoint of any term.) Cancellation forms are available at Extension Classes registration offices in Wesbrook Hall and at the MacPhail Center in downtown Minneapolis. Completed cancellation forms, with the instructor's signature, must be received by the Extension Classes registration office **before** the official start of final exam week for that term.

No instructor is authorized to accept cancellation of any registration. The student must submit the cancellation form (in person or by mail) 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.) 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 Wesbrook Hall or at the MacPhail Center in downtown Minneapolis.

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

1. It is considered to be a cancellation of the classes registered for.
2. A hold will be placed on the student's record until:
 - a. a \$10 check-handling fee is paid, and
 - b. the tuition normally held in accordance with the refund policy is paid.

Veterans—Any veteran registered under the G.I. Bill must notify the Extension Veterans Office, 101 Wesbrook (373-5777) when canceling a class. This is essential when it changes the credit load.

Cancellation of, or change in, scheduled classes (made by department of Extension Classes)

While the Extension staff sincerely regrets to do so, it is sometimes 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 cancellations. However, in the event that Extension Classes are canceled, the University of Minnesota radio station, KUOM (770 AM on the dial), will broadcast an announcement at 4 p.m. on the day in

question. Other local radio stations will usually carry the announcement about the same time. Listen for the announcement; it is the quickest and easiest method of obtaining the information.

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 four times in the last decade.

Refunds

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

When students cancel classes, 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 a \$5 cancellation fee (and any late fees or transfer 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 percentage schedules given below in items 3 and 4.

Students who wish to cancel a class and add another class should read the section on transferring classes, page 52.

1. Full refund of all tuition and fees will be made when a class is canceled by Extension Classes after a student has registered in it.
2. A refund of all tuition and fees **minus a \$5 cancellation fee** will be made:
 - A. When a student cancels before the first class meeting in any 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.
 - 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:
 1. 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 Westbrook 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.
 2. Present a transcript noting equivalent course(s), along with a fee statement and completed cancellation form, in person at 101 Westbrook Hall or by mail. Documents must be submitted at the same time before the fourth class meeting.
3. Refunds of tuition and fees for cancellation of classes after the first class meeting will be made as follows for classes that meet once a week:

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

4. Refunds of tuition and fees for cancellation of classes after the first class meeting will be made as follows for classes that meet twice a week:

	Semester	Quarter
a. Refund before the third class	75%	75%
b. Refund before the fifth class	75%	50%
c. Refund before the seventh class	50%	25%
d. Refund before the ninth class	25%	none
e. Refund after the ninth class	none	none

These refund schedules refer to the number of times the class has met, not the number of times the student has attended.

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

5. Late fees and transfer fees are not refundable in any case.

Cancellations by mail are effective the date of postmark.

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

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

See refunds for athletic facilities, page 530; health services fees, page 533; Regents' Scholarships, page 37.

Language laboratory

Some Extension classes may include recommended or required audio tape listening at the University Library's Learning Resources Center. Cassette tapes are available at the Center on the first floor of Walter Library on the Minneapolis East Bank campus and at the Listening/Viewing Area of the St. Paul Campus Central Library. 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 Walter Library Center at 373-2538 before coming in to request tapes.

Learning Resources Center Walter Library hours: 8 a.m. to 10 p.m., Monday through Thursday; 8 a.m. to 5 p.m., Friday; 9 a.m. to 5 p.m., Saturday; and 12 noon to 10 p.m., Sunday.

Call the St. Paul Campus Central Library (376-4648) for hours at the Listening/Viewing Area.

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 minimum 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.

Also, students may obtain a one-way educational transportation deduction for travel expenses incurred while driving from work to campus. However, if you go home before going to school, you may deduct the expense of going from home to school only to the extent it is not more than the transportation expense you would have if you had gone from work to school. This deduction is applicable only in the following situations: (1) education needed to meet the requirements of employer, or requirements of law or regulations for keeping salary, status or

employment, if the requirement imposed serves a bona fide business purpose; or (2) education needed to maintain or improve skills required in performing the duties of present employment, or trade or business. For information call the local office of the Internal Revenue Service at 291-1422, or from outside the Twin Cities metropolitan area call toll free 1-800-424-1040. A free IRS booklet, publication 508, *Educational Expenses*, may be of help.

Grievance procedures

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

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

Committee on student relations and academic standing

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



Course Offerings

Credit Courses begin page 61.

See the list of credit *Continuing Education for Women Courses*, page 439.

Also be sure to see *Noncredit Courses* beginning on page 441.

Courses printed in **red ink** in this *Bulletin* are limited-enrollment classes. Nonlimited-enrollment classes which have limited-enrollment sections have the limited sections printed in red. See *When and How to Register*, page 9.

See *Symbols*, page 60.

See the sample course description on page 23.

Courses in this section are listed alphabetically by department. See page 613 for a list of **Departments and Department Abbreviations**, and page 615 for **Buildings** and their abbreviations.

Course Numbering is explained on page 612.

See **Index** for page numbers of individual departments.

Maps begin page 617.

Abbreviations and addresses for off-campus classes appear on page 616.

A ♦ in the margin indicates course may be taken for half price. See page 48 for details.

Semester courses

The following departments offer one or more courses on the semester basis.

Chemistry
Chinese
Economics
French
German
Insurance

Italian
Japanese
Mathematics
Physics
Psychology
Transportation

Symbols

The following symbols are used throughout this Bulletin:

- A hyphen between numbers indicates a sequence course, the units of which must be taken in order, unless otherwise indicated.
 - ★ Enrollment space limited. See instructions on registration in limited-enrollment classes and sections, page 20. Limited-enrollment classes or sections are printed in red in this **Bulletin**.
 - ⊙ A joint Day/Extension class. See page 32.
 - † 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.
 - ◆ Regular credit course open for registration on a reduced, no-credit, tuition plan (see page 48).
 - △ Consent of division, department, or school offering course is required.
- cr Credit
Qtr Quarter
Sem Semester
Spec Special Term
S/N Satisfactory/No credit grading system. See page 42.
A/N Letter grading system. See page 42.
Lect Lecture
Rec Recitation
Prereq Prerequisite. See page 41.
Sec Section
Grad Graduate

Abbreviations

Campus building abbreviations are listed on page 615 (maps begin on page 617). Abbreviations and addresses for off-campus class sites (neighborhood centers) are on page 616 (maps begin on page 623). Course numbering is explained on page 612.

Credit Courses

A

Accounting (Acct)

School of Management

Textbooks for most courses in Acct are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450).

Your attention is called to the Accounting Certificate Program, page 593; to General College business studies; and to Professional Improvement Courses.

Information regarding names of instructors for Accounting classes is not available from either the Accounting Department or Extension Classes.

If an accounting class closes during registration, students should see page 24 for information regarding reopenings that may occur prior to the start of the term.

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

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 24 for early registration procedures.

All students must take Accounting courses A-N. Students may not audit accounting courses.

First year accounting courses

Acct 1024-1025 PRINCIPLES OF FINANCIAL ACCOUNTING I-II (formerly 1050). 3 degree credits each quarter, \$1050.

1024: Introduction to basic financial concepts, definitions, and relationships employed in the recording and reporting of business events. **1025:** Introduction to the effects of generally accepted valuations and measurements upon financial statements. **Must be taken A-N.** (No prereq for 1024; 1024 for 1025)

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

(continued next page)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Persons with prior background or training in Accounting may receive credit for one or both courses by passing a Special Examination in Acct 1024 and/or Acct 1025. Students must contact Extension Counseling (373-3905) early in order to submit a signed Special Exam form and \$30 fee for each exam they wish to take by the deadlines indicated below for each quarter. After all materials are submitted, the student will be given the location of the exam. No student will be allowed to sit for an exam until the \$30 fee is paid. Examinations will be given at the following times:

	<u>Examination Dates</u>	<u>Application Deadline</u>
Acct 1024	Tues., Aug. 14, 6:30 p.m.	Tues., Aug. 7
	Tues., Nov. 13, 6:30 p.m.	Tues., Nov. 6
	Tues., Feb. 12, 6:30 p.m.	Tues., Feb. 5
Acct 1025	Wed., Aug. 15, 6:30 p.m.	Tues., Aug. 7
	Wed., Nov. 14, 6:30 p.m.	Tues., Nov. 6
	Wed., Feb. 13, 6:30 p.m.	Tues., Feb. 5

Day School students must contact their college office prior to contacting Extension counseling.

★**Acct 1024 PRINCIPLES OF FINANCIAL ACCOUNTING I.** 3 degree credits, \$1050, \$111 plus \$1 special fee. Total \$112. (IS)

Introduction to basic concepts and definitions in accounting. Transaction analysis statement presentation. **Must be taken A-N.** (No prereq. Limited to 40)

Placement in this accounting class is done sequentially. **Do not fill in a section number or classroom on your registration form.** Instead, only indicate either a 6:10 or 8:10 beginning time. The registration office will add section number and location to your receipt and return to you.

- | | | | |
|-----------------|-------------------|--------------------------|-------------------------|
| Fall Qtr | Sec 1 | MW—6:10-7:25, AkerH 211 | |
| | Sec 2 | MW—6:10-7:25, AkerH 225 | |
| | Sec 3 | MW—6:10-7:25, AkerH 309 | |
| | Sec 4 | MW—6:10-7:25, AkerH 313 | |
| | Sec 5 | MW—6:10-7:25, AkerH 317 | |
| | Sec 6 | MW—6:10-7:25, AkerH 319 | |
| | Sec 7 | MW—6:10-7:25, AkerH 321 | |
| | Sec 8 | MW—6:10-7:25, MinMet 116 | |
| | Sec 9 | MW—6:10-7:25, MinMet 120 | |
| | Sec 10 | MW—6:10-7:25, MinMet 124 | |
| | Sec 11 | MW—6:10-7:25, FordH 150 | |
| | Sec 12 | MW—6:10-7:25, FordH 160 | |
| | Sec 13 | MW—8:10-9:25, AkerH 211 | |
| | Sec 14 | MW—8:10-9:25, AkerH 225 | |
| | Sec 15 | MW—8:10-9:25, AkerH 309 | |
| | Winter Qtr | Sec 16 | MW—6:10-7:25, AkerH 313 |
| | | Sec 17 | MW—6:10-7:25, AkerH 317 |
| | | Sec 18 | MW—6:10-7:25, AkerH 321 |
| | | Sec 19 | MW—6:10-7:25, AkerH 319 |
| | | Sec 20 | MW—6:10-7:25, AkerH 309 |
| | | Sec 21 | MW—6:10-7:25, AkerH 225 |

(continued next page)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Spring Qtr

- Sec 22 MW—6:10-7:25, AkerH 211
 Sec 23 MW—6:10-7:25, FordH 150
 Sec 24 MW—8:10-9:25, AkerH 313
 Sec 25 MW—8:10-9:25, AkerH 317
 Sec 26 MW—6:10-7:25, AkerH 319
 Sec 27 MW—6:10-7:25, AkerH 321
 Sec 28 MW—6:10-7:25, AkerH 211
 Sec 29 MW—6:10-7:25, AkerH 225
 Sec 30 MW—6:10-7:25, AkerH 309
 Sec 31 MW—6:10-7:25, AkerH 313
 Sec 32 MW—6:10-7:25, AkerH 317
 Sec 33 MW—6:10-7:25, AkerH 215
 Sec 34 MW—8:10-9:25, AkerH 319
 Sec 35 MW—8:10-9:25, AkerH 321

(For additional help, a supervised accounting lab will be open M and W, 5:15 to 9 p.m., AkerH 21)

★Acct 1025 PRINCIPLES OF FINANCIAL ACCOUNTING II. 3 degree credits, \$1050, \$111 plus \$1 special fee. Total \$112. (IS)

Valuation and measurement problems. Emphasis on inventories, marketable securities, property plant and taxes, leases. **Must be taken A-N.** (Prereq 1024. Limited to 40)

Placement in this accounting class is done sequentially. **Do not fill in a section number or classroom on your registration form.** Instead, only indicate either a 6:10 or 8:10 beginning time. The registration office will add section number and location to your receipt and return to you.

Fall Qtr

- Sec 1 TTh—6:10-7:25, AkerH 321
 Sec 2 TTh—6:10-7:25, AkerH 225
 Sec 3 TTh—6:10-7:25, AkerH 313

Winter Qtr

- Sec 4 TTh—6:10-7:25, AkerH 313
 Sec 5 TTh—6:10-7:25, AkerH 317
 Sec 6 TTh—6:10-7:25, AkerH 321
 Sec 7 TTh—6:10-7:25, AkerH 319
 Sec 8 TTh—6:10-7:25, AkerH 211
 Sec 9 TTh—6:10-7:25, AkerH 309
 Sec 10 TTh—6:10-7:25, AkerH 225

Spring Qtr

- Sec 11 TTh—8:10-9:25, AkerH 313
 Sec 12 TTh—6:10-7:25, AkerH 317
 Sec 13 TTh—6:10-7:25, AkerH 319
 Sec 14 TTh—6:10-7:25, AkerH 321
 Sec 15 TTh—6:10-7:25, AkerH 211
 Sec 16 TTh—6:10-7:25, AkerH 309
 Sec 17 TTh—8:10-9:25, AkerH 317

(For additional help, a supervised accounting lab will be open T and Th, 5:15 to 9, AkerH 21)

Read about abbreviations, symbols, and maps on page 60.
 Courses and sections in red have limits on enrollment. See page 20.

Upper division accounting courses

★Acct 3001 (replaces 1051) **MANAGERIAL ACCOUNTING**. 4 degree credits, \$1051, \$179.

Accounting analysis and reports for managerial decisions. Information for planning and controlling of operations. **Must be taken A-N.** (Prereq 1025 and at least 90 credits completed or in progress. Limited to 40)

Placement in this accounting class is done sequentially. **Do not fill in a section number or classroom on your registration form.** Instead, only indicate either a 6:10 or 8:10 beginning time. The registration office will add section number and location to your receipt and return to you.

Fall Qtr	Sec 1	MW—6:10-7:40, FordH 115
	Sec 2	MW—6:10-7:40, FordH 349
	Sec 3	MW—8:10-9:40, FordH 115
	Sec 4	MW—8:10-9:40, FordH 349
Spring Qtr	Sec 5	MW—6:10-7:40, FordH 115
	Sec 6	MW—6:10-7:40, FordH 349
	Sec 7	MW—8:10-9:40, FordH 115
	Sec 8	MW—8:10-9:40, FordH 349

Acct 3101 and 3102 replace Acct 3105-3106-3107

★Acct 3101 **FINANCIAL ACCOUNTING THEORY AND PRACTICE I**. 4 degree credits, \$179.

Development of generally accepted accounting principles. Income determination. Asset valuation. Statement of changes in financial position. Price level accounting. **Must be taken A-N.** (Prereq 1025 or 1051 and at least 90 credits completed or in progress. Limited to 40)

Fall Qtr	Sec 1	MW—6:10-7:40, BlegH 110
	Sec 2	MW—8:10-9:40, BlegH 110
	Sec 3	TTh—6:10-7:40, BlegH 145
	Sec 4	TTh—6:10-7:40, BlegH 110
	Sec 5	TTh—8:10-9:40, BlegH 145
Spring Qtr	Sec 6	MW—6:10-7:40, BlegH 240
	Sec 7	MW—8:10-9:40, BlegH 240

★Acct 3102 **FINANCIAL ACCOUNTING THEORY AND PRACTICE II**. 4 degree credits, \$179.

Accounting for and reporting of current and long-term liabilities, owners equity, leases. Pensions. Income tax accounting. **Must be taken A-N.** (Prereq 3101 and at least 90 credits completed or in progress. Limited to 40)

Fall Qtr	Sec 1	MW—6:10-7:40, BlegH 220
Winter Qtr	Sec 2	MW—6:10-7:40, BlegH 110
	Sec 3	MW—8:10-9:40, BlegH 240
	Sec 4	MW—8:10-9:40, BlegH 145

★Acct 3160 **ANALYSIS OF FINANCIAL STATEMENTS**. 4 degree credits, \$179.

Interpretation and analysis of financial statements and schedules for investors and other users. **Must be taken A-N.** (Prereq 1025 and at least 90 credits completed or in progress. For nonaccounting majors. Limited to 40)

Spring Qtr	Sec 1	MW—8:10-9:40, BlegH 110
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Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★Acct 3201 (replaces 3220-3221) **COST ACCOUNTING**. 4 degree credits, \$179.

Process and standard costs, behavior of costs under varying conditions, cost allocations, variance analysis, capital budgeting. **Must be taken A-N.** (Prereq 1051 or 3001, QA 3055 or DSci 3055. At least 90 credits completed or in progress. **Prereq will be enforced.** Limited to 40)

Winter Qtr Sec 1 MW—8:10-9:40, BlegH 110

Spring Qtr Sec 2 MW—6:10-7:40, BlegH 110

★Acct 5125 **AUDITING PRINCIPLES AND PROCEDURES**. 4 degree credits, \$179.

The auditor's role and function. Includes audit standards, ethics, procedures, and legal responsibilities. **Must be taken A-N.** The prerequisite will be enforced. (Prereq 3107 or 3102 and 3201. At least 90 credits completed or in progress. May not be taken for graduate credit. Limited to 40)

Fall Qtr Sec 1 MW—6:10-7:40, BlegH 145

Spring Qtr Sec 2 MW—6:10-7:40, BlegH 145

★Acct 5126 **INTERNAL AUDITING**. 4 degree credits, \$179.

Financial and operational auditing. Standards. Management of the function. **Must be taken A-N.** (Prereq 3102 and 3201 and at least 90 credits completed or in progress. May not be taken for graduate credit. Limited to 40)

Winter Qtr Sec 1 MW—5:30-7, BlegH 145

★Acct 5135 **INCOME TAX ACCOUNTING**. 4 degree credits, \$179. (IS)

An introduction to principles of Federal income taxation of various taxpaying entities. **Must be taken A-N.** (Prereq 1025. At least 90 credits completed or in progress. May not be taken for graduate credit. Limited to 40)

Fall Qtr Sec 1 MW—5:30-7, BlegH 230

Winter Qtr Sec 2 MW—6:10-7:40, BlegH 240

Spring Qtr Sec 3 MW—5:30-7, BlegH 220

★Acct 5180 **ADVANCED ACCOUNTING**. 4 degree credits, \$179.

Consolidated statements. Partnerships. Fiduciaries. International operations. Governmental accounting. Accounting for not-for-profit entities. **Must be taken A-N.** (Prereq 3107 or 3102. At least 90 credits completed or in progress. May not be taken for graduate credit. Limited to 40)

Winter Qtr Sec 1 MW—8:10-9:40, BlegH 205

★Acct 5230 **CORPORATE TAXATION**. 4 degree credits, \$179, plus special fee required.

The tax consequences of the formation, operation, and liquidation of a corporation. (Prereq Δ , 5135 and at least 90 credits completed or in progress. Offered fall quarter. **For registration and special fee information, call 373-3672.** Qualified students may register for graduate credit at the University of Minnesota. Limited to 40)

★Acct 5236 **TAXATION II**. 4 degree credits, \$179 plus special fee required.

Income taxation of corporations. Partnerships. Tax research. Transfer Tax. (Prereq Δ and Acct 5135 and at least 90 credits completed or in progress. Offered fall quarter. **For registration and special fee information, call 373-3672.** May not be taken for graduate credit. Limited enrollment)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★Acct 5270 **REPORTING FOR MANAGEMENT CONTROL.** 4 degree credits, \$179.

Management accounting tools and techniques applied to medium and large organization problems. Management control systems. **Must be taken A-N.** (Prereq 3201 or 3221 and at least 90 credits completed or in progress. May not be taken for graduate credit. Limited to 40)

Winter Qtr Sec 1 MW—6:10-7:40, BlegH 220

★Acct 5340 **PARTNERSHIP TAXATION.** 4 degree credits, \$179 plus special fee required.

The tax consequences of the formation, operation, and dissolution of a partnership. (Prereq Δ and Acct 5135 and at least 90 credits completed or in progress. Offered spring quarter. **For registration and special fee information, call 373-3672.** Qualified students may register for graduate credit at the University of Minnesota. Limited to 40)

5230, 5236, 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 1984-85, call 373-3672.

(See also Professional Improvement Courses and Seminars)

Adult Psychiatry (AdPy)

Medical School

(Your attention is called to the Adult Psychiatry Certificate, page 581)

TRAINING PROGRAM FOR MENTAL HEALTH WORKERS

The first course, AdPy 0101C, will be offered Fall Quarter for 3 certificate credits. Tuition is \$111 plus \$10 special fee. Total \$121. The course is designed to provide participants with an understanding of human growth and behavior in a continuum that ranges from normal to abnormal, and to survey the latest trends in the mental health movement. Formal presentations will be followed by small-group experience. (Prereq current employment in mental health or related field or #)

The second course, AdPy 0102C, will be offered Winter Quarter for 3 certificate credits. Tuition is \$111 plus \$10 special fee. Total \$121. The course is designed to explore group theory and the application of the process utilized in working with groups and families. Formal presentations will be followed by small-group experience. (Prereq 0101C or #)

The third course, AdPy 0103C, will be offered Spring Quarter for 3 certificate credits. Tuition is \$111 plus \$10 special fee. Total \$121. The course is designed to provide participants with an introduction to a variety of theories of psychotherapy, such as Jungian, Adlerian, Freudian, as well as Gestalt therapy, Bioenergetics, etc., and explore the ways in which these may be applied to clinical practice. Formal presentations will be followed by small-group experience. (Prereq 0102C or #)

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

Registration forms are available **only** through the Department of Continuing Education in Social Work, 107 Armory Building, University of Minnesota, 15 Church Street S.E., Minneapolis, MN 55455. To obtain registration forms, or any further registration information, write to the above address or call 373-5831.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Adult and Teacher Education (Educ)

College of Education

(Department of Curriculum and Instruction)

Textbooks for most Educ courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

Eugene M. Anderson, Associate Professor	Fredrick Hayen, Lecturer
Frank Braun, Associate Professor	Rosemarie Park, Assistant Professor
Charles R. Bruning, Associate Professor	R. Michael Paige, Associate Professor
John J. Cogan, Professor	Howard Y. Williams, Professor
Harlan G. Copeland, Associate Professor	Reynold Willie, 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.

See page 24 for information regarding reopenings that may occur prior to the start of the term.

★**Educ 5103 ADULT EDUCATION WORKSHOP.** 1-12 cr (max 12 cr). This offering 1 degree credit, \$47.25.

Study of topic appropriate to the activities and interests of the participants. **Must be taken A-N.** Focus sec 1: Learning Styles; Focus sec 2: Managing Organizational Behavior—Classroom and Organizational Leadership; Focus sec 3: Self-Directed Learning; Focus sec 4: Volunteerism; Focus sec 5: Older Adult Education; Focus sec 6: Assessing Organizational Needs. (Prereq practicing adult educator or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Fall Spec Term	Sec 1	Sa—9 a.m.-12, Sept. 22, Oct. 6, PeikH 165, Williams <i>No late fee through Sept. 14</i>
	Sec 2	W—6:30-9, Oct. 10, 17, 24, PeikH 165, Hayen <i>No late fee through Oct. 3</i>
Fall Qtr	Sec 3	W—4:15-6, BuH 123, Copeland, Williams
Spring Qtr	Sec 4	M—4:15-6, PeikH 315, Bruning
	Sec 5	M—6-9, PeikH 315, Bruning
	Sec 6	W—4:15-6, PeikH 46, Copeland

★**Educ 5104 SURVEY OF ADULT EDUCATION.** 3 degree credits, \$141.75.

General concepts in the field; literature, objectives, history, philosophy, research, institutions, issues and problems. **Must be taken A-N.** (Prereq senior standing. 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 M—6:30-9:30, PeikH 46, Copeland

★**Educ 5110 THE STATUS AND ROLE OF WOMEN IN AMERICAN SOCIETY.** 4 degree credits, \$189.

The role of women in American history; perceptions of women in literature and art; attention to women in social studies curricula; human sexuality; male and female character—mature and/or nurture; choices of family or career. **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 6 Extension students)

Spring Qtr Sec 1 Th—4:15-6, PeikH 225, Park

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**OEduc 5184 SUPERVISION OF CLINICAL EXPERIENCES.** 3 degree credits, \$141.75.

Supervision of professional laboratory experiences. **Must be taken A-N.** (Prereq #. 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 T—4:15-6, FolH 107, E Anderson

★**OEduc 5201 INTRODUCTION TO THE UNDEREDUCATED ADULT.** 3 degree credits, \$141.75.

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-N.** (No prereq. 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 Th—4:15-6, PeikH 25, Park

★**OEduc 5202 ADULT LITERACY: DIAGNOSIS AND PRESCRIPTION.** 3 degree credits, \$141.75.

Application of diagnostic information, instruments, and techniques to learning difficulties of adults in reading and mathematics programs. **Must be taken A-N.** (Prereq 5201 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Winter Qtr Sec 1 T—4:15-6, PeikH 225, Park

★**OEduc 5203 ADULT LITERACY: METHODS AND MATERIALS.** 3 degree credits, \$141.75.

Teaching literacy skills to adults: basic theories, approaches, overview of methods and materials for implementation. **Must be taken A-N.** (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 6 Extension students)

Spring Qtr Sec 1 T—4:15-6, PeikH 315, Park

★**OEduc 5204 READING IN WORK SETTINGS.** 3 degree credits, \$VoEd 5204, \$141.75.

Overview of concepts involved in integrated reading instruction into vocational training programs and work settings; diagnosis and methods of assessing needs of vocational students and workers on a job, and techniques for building needs into training programs. **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 6 Extension students)

Winter Qtr Sec 1 Th—6-9, Ramsey HS 252, Roseville, Park

★**OEduc 5301 DESIGNING THE ADULT EDUCATION PROGRAM.** 3 degree credits, \$141.75.

Designing and implementing educational programs for adults: concepts, theories, determining needs, educational objectives, learning experiences, and evaluating outcomes. **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 6 Extension students)

Spring Qtr Sec 1 M—3:45-6, PeikH 225, Copeland

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★○Educ 5401 ADULT LEARNING AND DEVELOPMENT THROUGH THE LIFE SPAN. 3 degree credits, \$141.75.

Physiological, social, and cultural bases of adult behavior; motivation, socialization, personality change as applied to education of adults. **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 6 Extension students)

Fall Qtr Sec 1 T—7-9, PeikH 31, Williams

Winter Qtr Sec 2 W—4:15-6, PeikH 31, Williams

Spring Qtr Sec 3 M—4:15-6, PeikH 225, Williams

★○Educ 5411 STRATEGIES FOR TEACHING ADULTS. 3 degree credits, \$141.75.

Identification, classification, and analysis of techniques used in teaching adults. **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 6 Extension students)

Fall Qtr Sec 1 T—4:15-6, PeikH 25, Willie

★○Educ 5440 MULTIDISCIPLINARY PERSPECTIVES ON AGING. 4 degree credits, \$CPsy 5305, \$HSU 5009, \$PA 5660, \$Soc 5960, \$SW 5024, \$189.

See course description for Soc 5960. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with PA 5660, Soc 5960, HSU 5009, Phar 5009, SW 5024. A joint Day/Extension class limited to 6 Extension students)

Fall Qtr Sec 1 MW—4:15-6, MoosT 2-620, Copeland, Galle

Educ 5440 is also offered as a Television Course. See page 551.

★○Educ 5501 CONTINUING EDUCATION AND THE PROFESSIONS. 3 degree credits, \$141.75.

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-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Spring Qtr Sec 1 T—4:15-6, PeikH 46, Willie

★○Educ 5601 INTERNATIONAL EDUCATION: TOPICS IN CLASSROOM PRACTICES AND PROCEDURES. 1-12 cr (max 12 cr). This offering 3 degree credits, \$141.75.

Educational practices in a designated country, region, or cultural group; impact of social and cultural features; organization, school structures, classroom practices, and delivery of educational services; potential for implementation in the United States. **Must be taken A-N.** (Prereq teaching license and #. 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 M—4:15-6, ChDev 216, Cogan

★○Educ 5603 INTERNATIONAL EDUCATION AND DEVELOPMENT. 3 degree credits, \$141.75.

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-N.** (No prereq. 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 T—4:15-6, PeikH 31

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**OEduc 5605 RESEARCH TOPICS: INTERNATIONAL DEVELOPMENT EDUCATION.** 3 degree credits, \$141.75.

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-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Winter Qtr Sec 1 T—4:15-6, PeikH 315, Cogan

★**OEduc 5607 APPLIED INTERNATIONAL DEVELOPMENT EDUCATION.** 3 degree credits, \$141.75.

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, outcomes. **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 6 Extension students)

Spring Qtr Sec 1 T—4:15-6, PeikH 225, Braun

★**OEduc 5901 INTRODUCTION TO COMMUNITY EDUCATION.** 3 degree credits, \$141.75.

Exploration and investigation of school, park, and recreation joint and individual programs and relationship to community education; introduction to administration of such programs. **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 6 Extension students)

Winter Qtr Sec 1 M—4:15-6, PeikH 225, Bruning

Aerospace Engineering and Mechanics (AEM)

Institute of Technology

Textbooks for most AEM courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

(See also Professional Development Recognition Program in Engineering and Science, page 187)

Stewart E. Almleaf, Pilot, Ground School Director

Gordon S. Beavers, Professor of Aerospace Engineering and Mechanics

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

Bradley Liebst, Assistant Professor of Aerospace Engineering and Mechanics

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

Ground school courses for air pilots— general information

The University Pilot Ground School course is designed to provide the ground instruction required by the Federal Aviation Administration prior to taking the Private Pilot written test. It will also be of benefit to the student pilot during in-flight instruction and will assist in preparation for the private pilot certificate.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

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

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

★AEM 3009 BASIC GROUND SCHOOL FOR PRIVATE PILOTS. 5 degree credits. \$232.50.

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

Open to all pilots and prospective pilots, regardless of their educational or flight-experience background. Designed primarily to prepare for the Federal Aviation Agency's written and oral examinations for certification as a Private Pilot. The course is also open to students who have no interest in a private pilot's certificate but do have an interest in aviation.

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

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

Winter Qtr Sec 2 **TTh**—7-9:40, AkerH 209, Almleaf

Spring Qtr Sec 3 **TTh**—7-9:40, AkerH 209, Almleaf

★AEM 1015 STATICS. 4 degree credits, \$148.

Force and moment vectors; resultants. Principles of statics. Application to simple trusses, frames and machines. Distributed loads. Hydrostatics. Properties of Areas. Laws of friction. (Prereq Phys 1271, Math 1231. Limited to 75)

Fall Qtr Sec 1 **W**—6:10-9:30, AkerH 209

Winter Qtr Sec 2 **W**—6:10-9:30, AkerH 209, Liebst

★AEM 3016 DEFORMABLE BODY MECHANICS. 4 degree credits, \$186.

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. (Prereq 1015, ¶Math 3221. Limited to 75)

Winter Qtr Sec 1 **T**—6:10-9:30, AmundH 240, Moran

★AEM 3036 DYNAMICS. 4 degree credits, \$186.

Review of particle dynamics. Mechanical systems and the rigid-body model. Kinematics and dynamics of plane systems. (Prereq 1015, ¶Math 3221. Limited to 75)

Winter Qtr Sec 1 **W**—6:10-9:30, AmundH 240

Spring Qtr Sec 2 **M**—6:10-9:30, AkerH 209

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Afro-American and African Studies (Afro)

College of Liberal Arts

Textbooks for most Afro courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450).

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. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

Aging Certificate

(See General College)

Agriculture, College of

See course listings for:

AGRICULTURAL AND APPLIED ECONOMICS

AGRONOMY AND PLANT GENETICS

ENTOMOLOGY

FOOD SCIENCE AND NUTRITION

HORTICULTURAL SCIENCE

SOIL SCIENCE

PLANT PATHOLOGY

RHETORIC

VOCATIONAL AND TECHNICAL EDUCATION

Read about the Master of Agriculture degree in Food Science and Technology and the Master of Agriculture degree in Technical Communication in the Degrees and Certificates section of this Bulletin.

COLLEGE OF AGRICULTURE PROFESSIONAL EXPERIENCE PROGRAM

Students enrolled in the College of Agriculture 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 \$140. Students register through any one of the 11 departments of the College of Agriculture. Additional information about PEP is available from the College of Agriculture office, 277 Coffey Hall on the St. Paul campus (373-0923), or from departmental offices and undergraduate advisers of the college.

Agricultural and Applied Economics (AgEc)

College of Agriculture

Textbooks for most AgEc courses are available at Books Underground on the St. Paul campus (373-0800).

Dale C. Dahl, Professor of Agricultural and Applied Economics

Hal Everett, Associate Professor of Agricultural and Applied Economics

Frank Smith, Professor of Agricultural and Applied Economics

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

AgEc 1400 AGRICULTURAL MARKETS AND PRICES. 4 degree credits, \$148. (IS)

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

Fall Qtr Sec 1 **M**—6:10-8:40, ClaOff B42, StP Campus, Dahl

AgEc 3290 AGRIBUSINESS MANAGEMENT. 4 degree credits, \$194.

Application of economic, other social science, and technical concepts to the decision-making process of firms supplying inputs to agriculture and/or processing and distributing agricultural products. (Prereq 1020, 1030 and Mgmt 3001 for agricultural business majors...3101 or # for others)

Spring Qtr Sec 1 **T**—6:10-8:40, ClaOff B36, StP Campus, Smith

★AgEc 5480 FUTURES MARKETS AND PRICES. 4 undergraduate degree credits, \$194; 3 graduate degree credits, \$145.50.

Economics of cash and futures trading on organized markets; futures trading theory; hedging and speculation. (Prereq 1400 or #. Qualified students may register for 3 graduate credits at the University of Minnesota. Limited to 40)

Winter Qtr Sec 1 **Th**—6:10-8:40, ClaOff B25, StP Campus, Everett

Agricultural Extension Service

The Agricultural Extension Service at the University provides continuing education programs for the people of Minnesota in classes, seminars, radio and television shows, and workshops. A project called DIAL "U" provides information by phone from the Extension Service. For a small fee, users may talk personally to an expert on insects and plants. For details about current programs, call the Agricultural Extension Service at 373-1246.

Agromony and Plant Genetics (Agro)

College of Agriculture

Textbooks for most Agro courses are available at Books Underground on the St. Paul campus (373-0800).

No courses scheduled 1984-85.

Agro 1010 PRINCIPLES OF AGRONOMY. 4 degree credits, \$3010, 3020, 3030. Tentatively scheduled for 1985-86.

Alcohol and Drug Counseling Education

(See Family Social Science)

American Indian Studies (Amln)

College of Liberal Arts

(See also CEW 0101, Arts and Cultures of the Southwest American Indian)

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 376-3000 two weeks before mail registration for that quarter begins.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

American Studies (AmSt)

College of Liberal Arts

Textbooks for most AmSt courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

All American Studies courses are open to nonmajors.

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

William H. Agee, Lecturer in American Studies

Roland Delattre, Professor of American Studies

Philip Furia, Professor of English

Elaine Tyler May, Associate Professor of American Studies

Lary May, Assistant Professor of American Studies

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

All courses required for the major are offered at least every two years. Interested students should discuss plans with a teacher of American Studies courses or with an Extension counselor (373-3905).

B.A. Major Sequence

Required Preparatory Courses 12 credits from 1101, 1102, 1103, 3111, 3112, 3113.
Recommended but not required are Hist 1301, 1302 (Survey of American History)

Major Requirements—68 credits, 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, 225 Lind Hall, or from the teachers of American Studies courses.

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

12 credits in foreign civilization (must be 3000 or 5000 level courses)

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

AmSt 1101 AMERICAN LIFE. 4 degree credits, §3111, \$148. (◆\$74)

Public and Private Life. Novels, painting, films, architecture, popular music, and historical documents will be used to explore people's changing roles and social expectations. The division of our lives into a "private" world of home, family, and friends, and a "public" world related especially to work. Values, modes of thought and feeling appropriate to each realm — and difficulties arising both from this division of our experience and from a carry-over of attitudes and behavior from one realm to the other. Special attention to the evolution of patterns of work and leisure, changing sexually defined roles, modern political "styles," the emergence of "youth" and "elder" subcultures, and the mass fantasies of television drama. (No prereq. Meets concurrently with AmSt 3111)

Fall Qtr Sec 1 M—6:20-8:50, LindH 203, Agee

★Sec 2 T—7-9:30, Richfield HS, Agee (Combined limit of 30)

AmSt 1102 AMERICAN LIFE. 4 degree credits, §3112, \$148. (◆\$74)

Consciousness and Social Arrangements. Novels, films, painting, popular music, architecture, and historical documents will be used to explore various ways in which

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Americans have interpreted their experience in relation to our political, social, and economic institutions. Topics: How members of various subcultures — occupational, racial, ethnic, sexual, religious — often develop a special “consciousness” leading to different “life-styles” or the advocacy of social reforms. How consciousness may change in times of great national crisis, such as the Civil War, the great depression, or Vietnam. How “modern” consciousness, with its confidence in technological and social progress, developed, and whether it is being challenged by a “post-modern” sense that things are getting out of control. (No prereq. Meets concurrently with AmSt 3112)

Winter Qtr Sec 1 M—6:20-8:50, LindH 203, Agee

★Sec 2 T—7-9:30, Richfield HS, Agee (Combined limit of 30)

AmSt 1103 AMERICAN LIFE. 4 degree credits, \$3113, \$148. (◆\$74) (IS)

Energy, Abundance, and the American Environment. Novels, painting, films, architecture, and historical documents will be used to explore the traditional American commitment to the ideal of progress toward ever higher levels of material plenty, and also our traditional attitudes toward the natural and urban-technological environments. Paintings of natural and urban landscapes; the rise of the skyscraper and of modern architecture; the work and ideas of Frank Lloyd Wright. Examination of environments we have created, in fact and fantasy. The energy crisis, and prospects for the future. (No prereq. Meets concurrently with AmSt 3113, sec 1, 2)

Spring Qtr Sec 1 M—6:20-8:50, LindH 203, Agee

★Sec 2 T—7-9:30, Richfield HS, Agee (Combined limit of 30)

AmSt 3111 INTRODUCTION TO AMERICAN CIVILIZATION. 4 degree credits, \$1101, \$154.

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

Fall Qtr Sec 1 M—6:20-8:50, LindH 203, Agee

★Sec 2 T—7-9:30, Richfield HS,
Agee (Combined limit of 30)

AmSt 3112 INTRODUCTION TO AMERICAN CIVILIZATION. 4 degree credits, \$1102, \$154.

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

Winter Qtr Sec 1 M—6:20-8:50, LindH 203, Agee

★Sec 2 T—7-9:30, Richfield HS, Agee (Combined limit of 30)

AmSt 3113 INTRODUCTION TO AMERICAN CIVILIZATION. 4 degree credits, \$1103, \$154.

See description for AmSt 1103, sec 1, 2. (Additional work required for 3113) (No prereq. Meets concurrently with 1103, sec 1, 2)

Spring Qtr Sec 1 M—6:20-8:50, LindH 203, Agee

★Sec 2 T—7-9:30, Richfield HS, Agee (Combined limit of 30)

AmSt 3113 AMERICAN CULTURAL DIVERSITY. 4 degree credits, \$154 (◆\$77)

Covers the tension between “mainstream” American culture and the particular values and traditions of various sub-cultures. Using novels and autobiographies, as well as students’ own ethnic and family backgrounds, we will explore the ways in which individual Americans find their own sense of identity between the pull of ethnic tradition and the force of “normative” American society. (No prereq)



Spring Qtr Sec 3 M—1-3:30, MacP, May, May

Offered through Continuing Education for Women

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

AmSt 3301 PROSEMINAR: AMERICA, NOW AND THEN. 4 degree credits, \$154 (◆\$77)

The Culture of the Revolutionary Era. An interdisciplinary approach to the American culture (or cultures) of two centuries ago in an attempt to explore how Americans viewed the world and interpreted their experience, to understand their ideals and how they sought to realize them. Social, intellectual, political, and military history provide a context for study of selected literature, painting, music, and architecture. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, LindH 216, Agee

AmSt 3302 PROSEMINAR: AMERICA, NOW AND THEN. 4 degree credits, \$154 (◆\$77)

The Culture of the Age of Enterprise. The "business nexus" of the America of 1865-1900 provides the context for an examination not only of intellectual, political, and social developments, but also of selected literature, painting, and architecture. Myths and realities related to the final conquest of the West and of Native Americans provide further perspectives on the era. (No prereq)

Winter Qtr Sec 1 **W**—6:20-8:50, LindH 216, Agee

AmSt 3303 PROSEMINAR: AMERICA, NOW AND THEN. 4 degree credits, \$154 (◆\$77)

Contemporary American Culture. An examination of several aspects of society today, some selected by the students. Special emphasis will be given to the possibilities of, and disputes about, various methods for "American Studies." Using materials from popular culture, literature, music, the arts, and the conflicts, and expectations of members of various groups in our pluralistic society. (No prereq)

Spring Qtr Sec 1 **W**—6:20-8:50, LindH 216, Agee

AmSt 3920 TOPICS: AMERICAN POETRY AND POPULAR SONG. 4 degree credits, \$154 (◆\$77)

The parallel developments of American lyric poetry and popular song lyrics between 1900 and 1950. Representative works by poets such as William Carlos Williams, e.e. cummings, and Marianne Moore, and songwriters such as Ira Gershwin, Cole Porter, and Dorothy Fields. (No prereq. Meets concurrently with Engl 3910, sec 2)

Fall Qtr Sec 1 **Th**—6:20-8:50, LindH 305, Furia

AmSt 5920 TOPICS: RELIGIOUS ETHICS IN AMERICA. 4 degree credits, \$154 (◆\$77)

Approaches and contributions to religious ethics in America, including historical background. Primary attention given to how different versions of religious ethics address such concerns as nuclear weapons, peace and war, and biomedical issues of birth, death, and medical care. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with RelS 5960)

Winter Qtr Sec 1 **W**—6:20-8:50, LindH 305, Delattre

AmSt 5920 TOPICS: THE TWENTIES. 4 degree credits, \$154 (◆\$77)

American literature, art, and music in the years after World War I, with particular attention to New York and Paris as international centers of the modernist movement. Representative works by Fitzgerald, Stein, Hemingway, Williams, Stieglitz, O'Keefe, Duchamp, the Gershwins, and others. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Engl 5610, sec 3)

Spring Qtr Sec 2 **T**—6:20-8:50, LindH 320, Furia

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Anatomy (Anat)

Medical School

Textbooks for most Anat courses are available at the Health Sciences Bookstore (376-4007).

(See also Biology; Physical Medicine and Rehabilitation; Physiology; and GC 3132, Human Body: Cardiovascular Anatomy and Physiology)

David Coulter, Assistant Professor of Anatomy

Jean Magney, Instructor in Anatomy

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

★**Anat 0058 ANATOMY OF THE EXTREMITIES.** No credit. Offered alternate years. Tentatively scheduled for fall 1985.

Anat 1001 ANATOMY AND HATHA YOGA. 2 degree credits, \$74.

A general survey of anatomy, organized systematically (respiratory system, circulatory system, digestive system, etc.), but structured around understanding the practice of Hatha Yoga. The major kriyas, asanas, and pranayama practices are each considered with the appropriate systems of the body, with emphasis on an internal appreciation of the anatomical and physiological effects and potential benefits of each practice. (Prereq previous or concurrent exposure to Hatha Yoga)

Fall Qtr Sec 1 M—6-8:30, JOAd 5-137, Coulter

★**Anat 3001 ELEMENTARY ANATOMY.** 5 degree credits, \$310.

A general survey of human anatomy, including histology, embryology, gross anatomy, and neuroanatomy, with some clinical and physiological correlations. (Prereq 1 quarter of college biology. Limited to 60)

Spring Qtr Sec 1 MW—6-9:30, JacH 5-137

Anat 3004, 3005 ADVANCED ANATOMY FOR NURSES AND NURSE ANESTHETISTS. 3 degree credits each quarter. \$186 each quarter.

A review of gross anatomy enhanced by an introduction to micro-anatomical structure as it relates to function. Emphasis is placed on the nervous, endocrine, cardiovascular, respiratory, and urinary systems. (Prereq 3001, #)

Fall Qtr 3004 Sec 1 M—1-4, JacH 5-137, Magney

Winter Qtr 3005 Sec 2 M—1-4, JacH 5-137, Magney

Ancient Near Eastern and Jewish Studies (ANEJ); Hebrew (Hebr); Jewish Studies (JwSt)

College of Liberal Arts

Textbooks for most courses in this department are available at the Minnesota Book Center in Williamson Hall (373-3688).

(See also Religious Studies; and CEW 0502, Middle East Kaleidoscope: The Quest for a Lasting Peace)

David Cooperman, Professor of Sociology

Jonathan Paradise, Associate Professor

Daniel Reisman, Associate Professor

Robert W. Ross, Associate Professor

Tzvee Zahavy, Associate Professor

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Ancient Near Eastern and Jewish Studies, Akkadian, Hebrew, and Jewish Studies. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

The following non-language classes may be applied toward the CLA second language requirement, Route II, for Hebrew: ANEJ 1504/3504, Pagan Myths and the Bible; JwSt 1034/3034, Introduction to Judaism; JwSt 3521, The Holocaust.

JwSt 1034 INTRODUCTION TO JUDAISM. 4 degree credits, \$3034, \$ReIS 1034, \$148. (◆\$74)

What are the basic beliefs, practices, and values of the Jews? This course studies the history of Judaism through the principal writings, festivals, and institutions of the Jewish people. Attention given to various movements and ideas of Jewish life from antiquity to the present. (No prereq. May be applied toward the CLA second language requirement, Route II, for Hebrew [see page 562]. Meets concurrently with 3034 and ReIS 1034)

Fall Qtr Sec 1 T—6:20-8:50, FolH 104, Zahavy

Hebr 1104 INTRODUCTION TO BIBLICAL HEBREW. 5 degree credits, \$185.

Hebrew alphabet, basic grammar, and vocabulary needed to read narrative portion of Bible. For students without previous knowledge of Hebrew. (A joint Day/Extension class)

Fall Qtr Sec 1 TTh—4:15-6, FolH 209

(See also CEW 0112, Beginning Hebrew)

Hebr 1105 INTRODUCTION TO BIBLICAL HEBREW. 5 degree credits, \$185.

See course description for Hebr 1104. (Prereq Hebr 1104 or #. A joint Day/Extension class)

Winter Qtr Sec 1 TTh—4:15-6, FolH 104

Hebr 1106 INTRODUCTION TO BIBLICAL HEBREW. 5 degree credits, \$185.

See course description for Hebr 1104. (Prereq Hebr 1105 or #. A joint Day/Extension class)

Spring Qtr Sec 1 TTh—4:15-6, FolH 104

ANEJ 1001 THE BIBLE: NARRATIVE TEXTS. 4 degree credits, \$3001, \$148. (◆\$74)

Survey of literary and historical narrative texts from Pentateuch, Joshua, Judges, Samuel, and Kings. Reading of extensive selections from Bible and some of the secondary materials which deal with the historical and literary background of the texts. Through lecture and discussions, students study the literary structure of the narratives, the leading motifs, and the range of interpretation allowed by the texts. (No prereq. Meets concurrently with 3001)

Fall Qtr Sec 1 M—6:20-8:50, FolH 107, Paradise

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

ANEJ 1002 THE BIBLE: PROPHECY. 4 degree credits, \$3002, \$148. (◆\$74)

Survey of Israelite Prophets with emphasis on Amos, Hosea, Isaiah, Jeremiah, Ezekiel, and Second Isaiah. Prophetic contributions of Israelite religion, personality of prophets, political events and prophetic reactions. Introduction to textual analysis and biblical scholarship. (No prereq. Meets concurrently with 3002)

Winter Qtr Sec 1 T—6:20-8:50, FolH 104, Paradise

ANEJ 1003 THE BIBLE: WISDOM, POETRY AND APOCALYPTIC. 4 degree credits, \$3003, \$148. (◆\$74)

Survey of books of Psalms, Proverbs, Job, Song of Songs, Lamentations, Ecclesiastes (Qoheleth). Characteristics of biblical poetry. Conceptions of Israelite wisdom movement. Traits of early Jewish apocalyptic writing. (No prereq. Meets concurrently with 3003)

Spring Qtr Sec 1 M—6:20-8:50, FolH 104, Zahavy

ANEJ 1504 PAGAN MYTHS AND THE BIBLE. 4 degree credits, \$3504, \$148. (◆\$74)

Examines the Bible in its Ancient Near Eastern historical context. Through lectures and discussions, attention will be focused on the early chapters of Genesis dealing with pre-Israelite history, and on Mesopotamian mythologies offering parallels. Among the subjects are: the Creation, the Garden of Eden, Cain and Abel, the Flood and the Tower of Babel. Readings will consist primarily of relevant portions of Genesis in translation, and parallel pagan myths. (No prereq. May be applied toward the CLA second language requirement, Route II, for Hebrew [see page 562]. Meets concurrently with 3504)

Winter Qtr Sec 1 M—6:20-8:50, FolH 104, Reisman

ANEJ 3001 THE BIBLE: NARRATIVE TEXTS. 4 degree credits, \$1001, \$154.

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

Fall Qtr Sec 1 M—6:20-8:50, FolH 107, Paradise

ANEJ 3002 THE BIBLE: PROPHECY. 4 degree credits, \$1002, \$154.

See course description for ANEJ 1002. (No prereq. Meets concurrently with 1002)

Winter Qtr Sec 1 T—6:20-8:50, FolH 104, Paradise

ANEJ 3003 THE BIBLE: WISDOM, POETRY AND APOCALYPTIC. 4 degree credits, \$1003, \$154.

See course description for ANEJ 1003. (No prereq. Meets concurrently with 1003)

Spring Qtr Sec 1 M—6:20-8:50, FolH 104, Zahavy

JwSt 3034 INTRODUCTION TO JUDAISM. 4 degree credits, \$1034, \$RelS 1034, \$154.

See description for 1034. (No prereq. May be applied toward the CLA second language requirement, Route II, for Hebrew [see page 562]. Meets concurrently with 1034 and RelS 1034)

Fall Qtr Sec 1 T—6:20-8:50, FolH 104, Zahavy

JwSt 3034 is also offered as a Television Course. See page 551.

ØHebr 3201, 3202, 3203 READINGS IN BIBLICAL HEBREW. 4 degree credits each quarter, \$154 each quarter.

Textual study of the Bible, basic research tools, and commentaries. Exegesis; development of reading fluency and familiarity with the Biblical text. (Prereq 1103 or 1106 or #. A joint Day/Extension class)

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Fall Qtr 3201 Sec 1 MW—4:15-6, FolH 110
Winter Qtr 3202 Sec 2 MW—4:15-6, FolH 203
Spring Qtr 3203 Sec 3 MW—4:15-6, FolH 203

ANEJ 3504 PAGAN MYTHS AND THE BIBLE. 4 degree credits, \$1504, \$154.

See course description for ANEJ 1504. (No prereq. Meets concurrently with 1504)

Winter Qtr Sec 1 M—6:20-8:50, FolH 104, Reisman

JwSt 3521 THE HOLOCAUST. 4 degree credits, \$154. (♦\$77) (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. May be applied toward the CLA second language requirement, Route II, for Hebrew [see page 562].)

Winter Qtr Sec 1 W—6:20-8:50, AndH 210, Ross, Cooperman, Zahavy

JEWISH STUDIES IN ISRAEL

Summer Study in Israel: Tentative summer program cosponsored by the Department of Ancient Near Eastern and Jewish Studies and Extension Classes Office of Study Abroad. This six-week summer program centered in Jerusalem focuses on the history, literature, and religion of the "Promised Land." Includes a one-week tour of Israel. (8 credits.) **For information:** call Extension Classes Office of Study Abroad at 376-5049.

Animal Science (AnSc)

College of Agriculture

Textbooks for most AnSc courses are available at Books Underground on the St. Paul campus (373-0800).

(See also IC 0219, Animal Ecology and Behavior, and related Informal Courses)

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 376-3000 two weeks before mail registration for that quarter begins.

Anthropology (Anth)

College of Liberal Arts

Textbooks for most Anth courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

(See also General College courses in social and behavioral sciences and in natural science)

Christy Caine, Visiting Professor of Anthropology
Luther Gerlach, Professor of Anthropology
Guy Gibbon, Associate Professor of Anthropology

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

John Ingham, Associate Professor of Anthropology
 Sharon Kemp, Instructor in Anthropology
 Hazel Lutz, Instructor in Anthropology
 Mischa Penn, Associate Professor of Anthropology
 William L. Rowe, Professor of Anthropology

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

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

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

Required Preparatory Courses
 1101, 1102

Major Requirements

(1) Two of the following courses: Anth 3201, 3301, 3302 (10 cr total); (2) Either Anth 3101 or 3592 (4 cr); (3) Senior requirement— one of the following: a. Individual research project under Directed Research (4 cr) b. Senior Seminar (4 cr); (4) Five electives from among 3000 and 5000 courses (20 cr)

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 376-3000 two weeks before mail registration for that quarter begins.

Anth 1101 HUMAN ORIGINS. 5 degree credits, \$1001, \$185. (♦\$92.50) (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)

Fall Qtr Sec 1 **T**—6:20-9:30, FordH 55, Gibbon

Spring Qtr Sec 2 **M**—6:20-9:30, FordH 55, Gibbon

Anth 1102 INTRODUCTION TO SOCIAL AND CULTURAL ANTHROPOLOGY. 5 degree credits, \$1002, \$185. (♦\$92.50) (IS)

Varieties and range of human behavior as revealed through comparative study of cultures in all parts of the world. Sec 2, 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**—6:30-9:50, Irondale HS, New Brighton, Ingham

Sec 2 **Th**—9 a.m.-12, MacP, Kemp

Offered through Continuing Education for Women

Winter Qtr Sec 3 **T**—6:20-9:30, FordH 55, Rowe

Spring Qtr Sec 4 **Th**—6:20-9:30, FordH 55, Gerlach

CEW

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Anth 3303 WOMEN: ANTHROPOLOGICAL PERSPECTIVES. 4 degree credits, \$154. (◆\$77)

A cross-cultural comparative study of women. Theoretical and methodological approaches in anthropology to the study of women. Examines the question of how cultural differences are related to differences in sex/gender status. Ideological expression of these differences are examined cross-culturally. Case studies from specific cultures will be used as a basis for understanding the position of women in the exercise of power and authority in kinship, marriage, economics, politics, and religion. (Prereq Anth 1102)

CEW

Winter Qtr Sec 1 **Th**—9 a.m.-11:30, MacP, Lutz
Offered through Continuing Education for Women

Anth 5117 ENERGY, RESOURCES USE, AND SYSTEM CHANGE. 4 degree credits, \$154. (IS)

Social-cultural system factors in the development, production, control, distribution, and use of energy, water, key resources, and food in the United States and other societies. Social-cultural evolution, interaction among different societies; growth and no-growth issues; emerging global interdependence. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension Class)

Spring Qtr Sec 1 **T**—6:20-9:30, FordH 120, Gerlach

Anth 5151 CULTURAL CHANGE AND DEVELOPMENT. 4 degree credits, \$154. (◆\$77)

Processes of cultural change: invention, diffusion, and acculturation. Effects of colonialism, urbanization, and modernization. Analysis of developing societies. Applied anthropology. (Prereq 1102 or 5102 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6:20-9:30, FordH 285, Rowe

Anth 5177 ARCHAEOLOGICAL RESOURCE MANAGEMENT. 4 degree credits, \$154. (◆\$77)

Public archaeology; impact of federal, state laws and regulations on archaeological site survey, mitigation, preservation, and interpretation. (Prereq 1101. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **T**—6:20-9:30, FordH 170, Caine

Anth 5392 PHILOSOPHICAL ANTHROPOLOGY. 4 degree credits, \$154. (◆\$77)

Survey of a cluster of traditional problems associated with major views on human nature and culture. Variations on these views and specific arguments of relativists, phenomenologists, behaviorists. Recent ethnographic theory. (Prereq 1102 or 5102. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—6:20-9:30, FordH 170, Penn

WINTER QUARTER IN MEXICO

Anthropology in Mexico: Winter quarter 1986 in Cuernavaca, Mexico, cosponsored by the Department of Anthropology and the Extension Classes Office of Study Abroad. Topics may include pre-Hispanic Mesoamerica and modern cultural anthropology. (12 to 13 credits). **For information:** call Extension Classes Office of Study Abroad at 376-5049.

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Courses and sections in red have limits on enrollment. See page 20.

Arabic

(See Middle Eastern and South Asian Studies)

Archaeology

(See Anthropology, Classics, and Informal Courses)

Architecture (Arch)

Institute of Technology

Textbooks for most Arch courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

(See also Landscape Architecture; Art History; Informal Courses; Professional Improvement Courses; and Horticulture)

Lee Anderson, Assistant Professor of Architecture
David Bowers, Lecturer in Architecture
Peter Carlsen, Lecturer in Architecture
Foster Dunwiddie, Assistant Professor of Architecture
Daniel Feidt, Lecturer in Architecture
Dennis Grebner, Professor of Architecture
Cynthia Jara, Assistant Professor of Architecture
James Lammers, Lecturer in Architecture
David Norback, Assistant Professor of Architecture
Marcia Ohlhausen, Lecturer in Architecture
Richard Polister, Lecturer in Architecture
Craig Rafferty, Assistant Professor of Architecture
Craig Roney, Assistant Professor of Architecture
Robert Russek, Lecturer in Architecture
David Showalter, Assistant Professor of Architecture
J. Stephen Weeks, Assistant Professor of Architecture
Bryan Wessel, Lecturer in Architecture
Jeri Zuber, Assistant Professor of Architecture

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

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

B.A. Major Sequence

Required Preparatory Courses (which must be completed with a minimum grade of C)
 Phys 1041-1042 and 1045, 1046 (labs); Math 1211-1221; Arts 1107, 1108, 1109 or Arch 1041, 1042, 1043, Arch 1021-1022-1023 (Arch 1021-1022-1023 may be taken at the same time as the first year of design)

Major Requirements

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

Three courses chosen from 5051, 5052, 5053, 5054, 5055, 5056, 5057, 5061

Curriculum Alternatives—The 4-year CLA program, leading to a B.A., is often sought as a period of preprofessional training preceding admission to the Institute of Technology for 2 additional years of work toward the professional degree, Bachelor of

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Architecture, or preceding admission into the Graduate School for study toward the Master of Architecture. Students who intend to seek a professional degree should take the following courses, and should consult the School of Architecture and Landscape Architecture office for the appropriate sequence: AEM 3092-3093**, ArtS 3140, CE 3600-3601-3602**, Arch 3061-3062, and Arch 3064-3065**, while completing their B.A.

**These courses do not carry CLA credit.

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

Admission Requirements

Students planning to enroll in the architectural design sequence courses, Arch 3081-3093, will be enrolling as CEE students. Enrollment is limited and preference will be given to students who are candidates for the Bachelor of Arts degree. Students may not take any day school architectural design courses until they have been admitted by the Admissions Committee of the School of Architecture.

Students enrolled in Architectural Design through Extension who wish to continue as candidates for the professional Bachelor of Architecture degree should make application to the School of Architecture during the winter quarter of their second year in architectural design.

Candidates for the Master of Architecture degree should apply during the year when the Bachelor of Arts degree is expected. Application forms are available at 110 Architecture Building.

Application forms for Extension students are available in the School of Architecture, in the Extension Registration Office (101 Westbrook Hall), or at Extension Counseling (314 Nolte Center; telephone 373-3905).

Unless otherwise indicated, you need not be majoring in Architecture 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 Architecture. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

Arch 1021 HISTORY OF ENVIRONMENTAL DEVELOPMENT: ARCHITECTURE AND LANDSCAPE ARCHITECTURE. 4 degree credits, \$148 plus \$5 course fee. Total \$153. (♦\$74 plus \$5 course fee. Total \$79)

An introduction to architecture; the philosophy and principles of architecture and landscape architecture as an art; a survey of architectural history from ancient times through the gothic era. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, Arch 25

Arch 1022 HISTORY OF ENVIRONMENTAL DEVELOPMENT: ARCHITECTURE AND LANDSCAPE ARCHITECTURE. 4 degree credits, \$148 plus \$5 course fee. Total \$153. (♦\$74 plus \$5 course fee. Total \$79)

An introduction to architecture; the philosophy and principles of architecture and landscape architecture as an art; a survey of architectural history from the Renaissance to the modern era. (No prereq)

Winter Qtr Sec 1 T—6:20-8:50, Arch 25

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Arch 1023 HISTORY OF ENVIRONMENTAL DEVELOPMENT: PLANNING. 4 degree credits, \$148 plus \$5 course fee. Total \$153. (♦ \$74 plus \$5 course fee. Total \$79)

Introduction to urban planning. Survey of the rise and history of cities as centers of civilization. Collaboration among various disciplines for creating better urban environment and improving the quality of human life in cities. (No prereq)

Spring Qtr Sec 1 T—6:20-8:50, Arch 25

★**Arch 1031 BASIC DESIGN: VISUAL THINKING.** 4 degree credits, \$148 plus \$5 course fee. Total \$153.

Conceptual thinking, visual understanding, introduction to "R-mode" (right brain hemisphere) thinking through observation, conception, and drawing, translation from "Verbal/Logical" thinking to the "Creative/Intuitive" mode. (No prereq. Limited to 30)

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

★**Arch 1032 BASIC DESIGN: COLOR THEORY/USE.** 4 degree credits, \$148 plus \$5 course fee. Total \$153.

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—6:20-8:50, Arch 10, Grebner

★**Arch 1041, 1042, 1043 ART FOR ARCHITECTURE STUDENTS.** 2 degree credits each quarter, \$74 each quarter.

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

Fall Qtr 1041 Sec 1 W—6:20-8:50, Arch 25, Russek

Winter Qtr 1042 Sec 2 W—6:20-8:50, Arch 25, Russek

Spring Qtr 1043 Sec 3 W—6:20-8:50, Arch 25, Russek

Arch 1050 SHAPING OUR ENVIRONMENT: AN INTRODUCTION TO ARCHITECTURE AND ITS PERFORMERS. 2 degree credits, \$74. (♦ \$37)

Winston Churchill's famous saying, "First we shape our environment, then it shapes us," points up the importance of knowing how our surroundings came to be, who makes them. How are they made, what is the process, who are the participants, what forces act in their decisions? The student is introduced to the history, principles, elements, and styles of architecture. They are informed of the role, process, method, and the architect's way of thinking. Upon completion of this course, the student will better understand the cause and relationships involved in the development of our Built Environment. (No prereq)

Spring Qtr Sec 1 W—6:20-8:50, Arch 20, Carlsen

★**Arch 3033 BASIC DESIGN: VISUAL COMMUNICATION.** 4 degree credits, \$186 plus \$5 course fee. Total \$191.

Professional delineation, primarily intended for more advanced students in architectural design; exploration and use of variety of presentation and study techniques; methods/media investigation, modern techniques. (Prereq previous or concurrent registration in architectural design or #. Limited to 30)

Spring Qtr Sec 1 T—6:20-8:50, Arch 10, Grebner

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Arch 3061 BUILDING SYSTEMS. 4 degree credits, \$186 plus \$5 course fee. Total \$191.

Building Systems, Subsystems, and components; principles of structural theory; materials and methods of construction; new and developing technologies. Two lecture hours a week plus four laboratory hours. (Prereq previous or concurrent registration in 3081 or #. This course sequence is technical, and is recommended for all architectural students and required for the professional Bachelor of Architecture degree)

Fall Qtr Sec 1 T—6:20-8:50, lab hrs arr, Arch 35, Weeks

Arch 3062 BUILDING SYSTEMS. 4 degree credits, \$186 plus \$5 course fee. Total \$191.

Continuation of 3061. (Prereq 3061. This course sequence is technical, and is recommended for all architectural students and required for the professional Bachelor of Architecture degree)

Winter Qtr Sec 1 T—6:20-8:50, lab hrs arr, Arch 35, Weeks

Arch 3063 WORKING DRAWINGS AND SPECIFICATIONS. 4 degree credits, \$186 plus \$5 course fee. Total \$191.

This course is technical and intended for the student who wants to develop an understanding and skills in the preparation of drawings which could be used to construct a building. Two lecture hours a week and four laboratory hours. (No prereq)

Spring Qtr Sec 1 T—6:20-8:50 (plus lab hrs arr), Arch 35, Szomor

Restrictions in Architecture

Students planning to enroll in the Architectural Design sequence courses, Arch 3081-3093, must be accepted as candidates for either the Bachelor of Arts with a major in architecture degree or the professional Bachelor of Architecture degree. Application forms are available in the offices of the School of Architecture; in the Extension Registration Office, 101 Wesbrook Hall; or at Extension Counseling, 314 Nolte Center (373-3905). Interviews and the completion of pre-architecture course work are required.

★**Arch 3081-3082-3083 ARCHITECTURAL DESIGN.** 6 degree credits each quarter, \$279 plus \$10 course fee and \$10 special fee. Total \$299 each quarter.

Basic exercises in composition of line, form, proportion, color, and texture. Elements of architectural design. Architectural drawing; model making; design process. (Prereq second year for IT and CLA students for 3081; 3081 for 3082; 3082 for 3083. Courses meet concurrently, and with 3091, 3092, 3093. See admission requirements above. Limited to 50)

Fall Qtr **3081** Sec 1 MTh—6:20-8:50, Sa—9 a.m.-12, Arch 55

3083 Sec 2 MTh—6:20-8:50, Sa—9 a.m.-12, Arch 55

Winter Qtr **3082** Sec 3 MTh—6:20-8:50, Sa—9 a.m.-12, Arch 55

3083 Sec 4 MTh—6:20-8:50, Sa—9 a.m.-12, Arch 55

Spring Qtr **3083** Sec 5 MTh—6:20-8:50, Sa—9 a.m.-12, Arch 55

★**Arch 3091-3092-3093 ARCHITECTURAL DESIGN.** 6 degree credits each quarter, \$279 plus \$10 course fee and \$10 special fee. Total \$299 each quarter.

Development of structures as an integral part of design; site planning. (Prereq 3083 for 3091; 3091 for 3092; 3092 for 3093. Courses meet concurrently, and with 3081, 3082, 3083. See admission requirements above. Limited to 50)

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Fall Qtr	3091	Sec 1	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 55
	3092	Sec 2	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 55
	3093	Sec 3	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 55
Winter Qtr	3091	Sec 4	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 55
	3092	Sec 5	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 55
	3093	Sec 6	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 55
Spring Qtr	3091	Sec 7	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 55
	3092	Sec 8	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 55
	3093	Sec 9	MTh —6:20-8:50, Sa —9 a.m.-12, Arch 55

Arch 3200 COMMUNICATIONS: FILM/VIDEO IN THE BUILT ENVIRONMENT. 4 degree credits, \$186.

new

An introduction to the use of film (16mm) and video techniques in understanding the built environment; a "hands-on" approach to learning will complement the theory and history of the media. Students are expected to develop the understanding and skills necessary to the production of a product. The course sequence is divided into five sessions on video (Feidt) and five sessions on film (Polister). (Prereq Arch 3091 or #. Intended for architecture students and interested professionals)

Fall Qtr Sec 1 **W**—6:20-8:50, Arch 35, Feidt, Polister

Arch 3203 COMMUNICATIONS: PHOTOGRAPHY FOR ARCHITECTURE. 4 degree credits, \$186.

new

For students and professionals who want to gain more understanding and practice in the uses of the various photographic techniques associated with the architectural process (including documenting programming, design, and presentation). Begins with an overview of photographic applications in architecture. Problems, camera, procedures used to solve architectural problems are covered. The course then concentrates on practical photography using 35mm cameras. Light, film, and exposure are explored through assignments. Students are expected to produce and present visual presentations. Principles of photographic reproduction using various media are studied. Basic black and white darkroom equipment and procedures are explored. A 35mm camera is required. (Prereq Arch 3091 or #. Intended for architecture students and interested professionals)

Winter Qtr Sec 1 **W**—6:20-8:50, Arch 50, Bowers

Arch 5051 ANCIENT ARCHITECTURE. 4 degree credits, \$186 plus \$4 course fee. Total \$190.

History of development of architecture and urban design in Egypt, Mesopotamia, Crete, Mycenae, and classical Greece and Rome until the advent of Christianity. (Prereq 1021. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—6:20-8:50, Arch 55

Arch 5055 ENGLISH AND EARLY AMERICAN ARCHITECTURE. 4 degree credits, \$186 plus \$4 course fee. Total \$190.

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

Winter Qtr Sec 1 **W**—6:20-8:50, Arch 5

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Arch 5056 MODERN ARCHITECTURE. 4 degree credits, \$186.

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

Spring Qtr Sec 1 **W**—6:20-8:50, Arch 5

Arch 5125 REAL ESTATE DEVELOPMENT. 4 degree credits, \$186 plus \$5 course fee. Total \$191.

Fundamentals of real estate development and investment building. Processes and roles of specialists in the development of investment projects. Topics covered include: cash flow analysis, project budget estimating, financing, depreciation, land acquisition, market analysis, government regulation, retail/commercial developments, and condominium development. (Prereq senior or graduate in Architecture or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with RE 0813C)

Fall Qtr Sec 1 **M**—6:20-8:50, Arch 25, Lammers

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

Arch 5141 HISTORIC PRESERVATION. 4 degree credits, \$186.

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. A joint Day/Extension class)

Fall Qtr Sec 1 **TTh**—5:15-6:45, Arch 40, Dunwiddie

Arch 5142 HISTORIC BUILDING RESEARCH AND DOCUMENTATION. 4 degree credits, \$186.

Philosophy, theory, and method of historic building research, descriptive analysis of buildings, building documentation, historical archaeology, and architectural taxonomy. (Prereq 5141 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. A joint Day/Extension class)

Winter Qtr Sec 1 **TTh**—5:15-6:45, Arch 40, Dunwiddie

Arch 5143 HISTORIC BUILDING CONSERVATION. 4 degree credits, \$186 plus \$5 course fee. Total \$191.

Historic building systems, materials and methods for their conservation; introduction of contemporary systems in historic buildings. (Prereq 5141 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. A joint Day/Extension class)

Spring Qtr Sec 1 **TTh**—5:15-6:45, Arch 40, Dunwiddie

Arch 5200 MARKETING ARCHITECTURAL SERVICES. 4 degree credits, \$186.

Marketing professional architectural/engineering services is 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, strate-

new

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

gizing, proposals, presentations, and contract closing. For upper level undergrad, grad, and new practitioner. (Prereq 5126 or #. Intended for advanced students in architecture, but open to the architectural profession. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 W—6:20-8:50, Arch 35, Wessel

- ★Arch 5961 **COMPUTER-AIDED ARCHITECTURAL DESIGN**. 4 degree credits, \$186. An introductory computer-aided architectural design course which includes computer-aided drafting on Teraks and the mainframe Cyber; selection and implementation of business microcomputers and turnkey CAD systems, software availability, selection, trends, and anticipated developments. (Prereq Arch major, 3083 or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Winter Qtr Sec 1 W—6:20-8:50, Arch 20, Anderson

- ★Arch 5962 **COMPUTER-AIDED ARCHITECTURAL DESIGN**. 4 degree credits, \$186. Covers implementing a computer-aided design system in a design office with hands-on experience with a microcomputer-based CAD system and a visit to an office using a CAD system. Also covers use of computers in communications, networking, simulations, database systems, PERT, CPM, and land-use analysis. (Prereq 5961. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Spring Qtr Sec 1 W—6:20-8:50, Arch 10, Anderson

- Arch 5970 **DIRECTED STUDY**. Credits arranged. \$46.50 a credit.

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

Art Education (ArEd)

College of Education

(Department of Curriculum and Instruction)

Textbooks for most ArEd courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

(Also see the listing for MacPhail Center for the Arts)

Margaret DiBlasio, Associate Professor of Art Education

Thomas C. Slettehaugh, Associate Professor of Art Education

RESTRICTION IN ART EDUCATION CLASSES

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

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.

See page 24 for information regarding reopenings that may occur prior to the start of the term.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

- ★**ArEd 5001 ART MEDIA TECHNIQUES.** 3 degree credits this offering (maximum 12 cr), \$141.75.

Lectures, demonstrations, discussions, critique sessions exploring and learning various techniques and processes in creativity; handling specific media. **This offering will focus on printmaking. 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 6 Extension students)

Fall Qtr Sec 1 W—4:15-6:30, WullH 220, 240, Slettehaug

- ★**ArEd 5302 CURRICULUM INNOVATIONS IN ART EDUCATION.** 4 degree credits, \$189.

Study and analysis of innovations, evaluation of materials for teaching units and projects. **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 6 Extension students)

Fall Qtr Sec 1 T—4:15-7, WullH 110, 120, DiBlasio

- ★**ArEd 5303 ART PROGRAMS FOR EXCEPTIONAL LEARNERS.** 4 degree credits, \$189.

Development and evaluation of art teaching units and projects for learners of all ages. **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 6 Extension students)

Spring Qtr Sec 1 M—4:15-7, WullH 240

- ★**ArEd 5318 ART EDUCATION IN EUROPE.** 3 degree credits, \$141.75.

Current practices, problems, and achievements in art education in Western Europe compared with practices in American art education. **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 6 Extension students)

Winter Qtr Sec 1 T—4:15-7, WullH 120, Slettehaug

- ★**ArEd 5386 IMPROVING ART PROGRAMS IN THE SCHOOLS.** 4 degree credits, \$189.

Critical examination of art programs in the schools. **Must be taken A-N.** (Prereq teaching experience or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Winter Qtr Sec 1 M—4:15-7, WullH 120

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 courses see page 164 or call 373-2268.

Art History (ArH)

College of Liberal Arts

Textbooks for most ArH courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

Frederick Asher, Professor of Art History

Norman Canedy, Professor of Art History

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Marion J. Nelson, Professor of Art History
 Robert Poor, Professor of Art History
 Thomas Russell, Lecturer in English
 Fred Smith, Assistant Professor of Art History
 Robert Silberman, Assistant Professor of Art History
 Michael Stoughton, Associate Professor of Art History

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

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

B.A. Major Sequence

Required Preparatory Courses

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

Major Requirements

3008, 3009, 3011, 3012, 4 additional art history courses, to total 16 credits. Major project: 3895, 3971, and a 5xxx course to be designated as the "project course" (consult ArtH department regarding major project).

A minor in Art History is also available. Interested students should contact the Extension Counseling Office, 373-3905.

You need not be majoring in Art History 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 Art History. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

(See also MacPhail Center for the Arts)

★**ArtH 1001 INTRODUCTION TO THE VISUAL ARTS.** 4 degree credits, \$3001. \$148 plus \$4 course fee. Total \$152. (◆\$74 plus \$4 course fee. Total \$78)

A comprehensive survey of the main problems of meaning, form, and style in the visual arts (architecture, sculpture, painting, and graphic arts, and photography) of the various cultures and periods. The course attempts to enable students to interpret works of art critically by relating them to their geographic, historical, and social origins, and by placing them within the proper phases in the evolution of art. The course touches on the main periods of art history, and is designed to familiarize students with the critical and technical vocabulary used in the literature of art. (No prereq. Meets concurrently with 3001. Limited to a combined total of 55)

cew

Winter Qtr Sec 1 T—1:30-4, MacP, Poor (No limit)

Offered through Continuing Education for Women

Sec 2 T—6:20-8:50, JonesH 207B, Poor

(See also Architecture; General College; and Journalism)

Read about abbreviations, symbols, and maps on page 60.
 Courses and sections in red have limits on enrollment. See page 20.

★**ArH 3001 INTRODUCTION TO THE VISUAL ARTS.** 4 degree credits, \$1001, \$154 plus \$4 course fee. Total \$158.

See course description for ArH 1001. (No prereq. Meets concurrently with 1001. Limited to a combined total of 55)

cew

Winter Qtr Sec 1 **T**—1:30-4, MacP, Poor (No limit)

Offered through Continuing Education for Women

Sec 2 **T**—6:20-8:50, JonesH 207B, Poor

ArH 3008 HISTORY OF ANCIENT ART. 4 degree credits, \$1008, \$154 plus \$4 course fee. Total \$158. (♦\$77 plus \$4 course fee. Total \$81)

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

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

ArH 3011 HISTORY OF RENAISSANCE AND BAROQUE ART. 4 degree credits, \$154 plus \$4 course fee. Total \$158. (♦\$77 plus \$4 course fee. Total \$81)

The history of art, examined through selected major monuments in architecture, sculpture, and painting from the early 14th century through the Baroque period. (No prereq)

cew

Fall Qtr Sec 1 **T**—1:30-4, MacP, Canedy

Offered through Continuing Education for Women

★**ArH 3011 HISTORY OF RENAISSANCE AND BAROQUE ART.** 4 degree credits, \$154 plus \$4 course fee. Total \$158. (♦\$77 plus \$4 course fee. Total \$81)

The major monuments in architecture, sculpture, and painting from the early 14th century through the Baroque. The collections and galleries of the institute will be utilized. (No prereq. Limited to 55)

Spring Qtr Sec 2 **Th**—6:30-9, Mpls Institute of Arts, room 211,
2400 S 3 Ave, Stoughton

ArH 3013 INTRODUCTION TO FAR EASTERN ART. 4 degree credits, \$1016, SEAS 3013, \$154 plus \$4 course fee. Total \$158. (♦\$77 plus \$4 course fee. Total \$81)

Major themes of Far Eastern art. The arts of China and Japan (not all-inclusive). (No prereq. Meets concurrently with EAS 3013)

Fall Qtr Sec 1 **T**—6:20-8:50, JonesH 207B, Poor

ArH 3014 ART OF INDIA. 4 degree credits, \$154 plus \$4 course fee. Total \$158. (♦\$77 plus \$4 course fee. Total \$81)

Indian sculpture and architecture from the prehistoric Indus Valley civilization through the major historical periods. Hindu and Buddhist art from 300 B.C. to 1200 A.D. (No prereq. May be applied toward the CLA second language requirement, Route II, for Bengali, Hindi, Marathi, Persian, Sanskrit, Turkish, and Urdu [see page 562])

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

ArH 3303 BAROQUE AND ROCOCO PAINTING IN FRANCE. 4 degree credits, \$154 plus \$4 course fee. Total \$158. (♦\$77 plus \$4 course fee. Total \$81)

French painting of the 17th and first half of the 18th centuries. (No prereq. May be applied toward the CLA second language requirement, Route II, for French [see page 562])

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

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

ArtH 3579 THE ARTS IN AMERICA: GREAT DEPRESSION TO THE PRESENT. 4 degree credits, \$154 plus \$4 course fee. Total \$158. (◆\$77 plus \$4 course fee. Total \$81)

American architecture, painting, sculpture, and the popular and decorative arts in their social, historical, and cultural context. (No prereq)

Spring Qtr Sec 1 **Th**—6:20-8:50, JonesH 207B, Silberman

ArtH 5641 SCANDINAVIAN ART OF THE 19TH AND 20TH CENTURIES. 5 degree credits, \$192.50 plus \$4 course fee. Total \$196.50. (◆\$96.25 plus \$4 course fee. Total \$100.25)

Painting, sculpture, architecture, and decorative arts; the rise of expressionism in the fine arts and of "Scandinavian modern" in design. (Prereq one art history course or #. May be applied toward the CLA second language requirement, Route II, for Danish, Finnish, Norwegian, and Swedish [see page 562]. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **W**—6:20-8:50, JonesH 207B, Nelson

ArtH 5911 MESOAMERICA: ART AND ARCHITECTURE OF MEXICO AND GUATEMALA. 5 degree credits, \$192.50 plus \$4 course fee. Total \$196.50. (◆\$96.25 plus \$4 course fee. Total \$100.25)

Pre-Hispanic monuments in Mexico and Guatemala; Olmec, Teotihuacan, and Maya cultures. (Prereq senior or graduate or #. May be applied toward the CLA second language requirement, Route II, for Spanish [see page 562]. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—6:20-8:50, JonesH 207B, Smith

ArtH 5925 HISTORY OF PHOTOGRAPHY. 4 degree credits, \$154 plus \$4 course fee. Total \$158. (◆\$77 plus \$4 course fee. Total \$81)

Origins and development of photography with attention to technology and the cultural impact. Major aesthetic achievements in photography from its beginning to present. (Prereq 3012 or #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—6:20-8:50, JonesH 207B, Silberman

ArtH 5940 THE CINEMA OF ALFRED HITCHCOCK. 4 degree credits, \$Engl 5940, \$154 plus \$10 course fee. Total \$164. (◆\$77 plus \$10 course fee. Total \$87)

Exploration of thematic concerns including guilt, complacency, paralysis, romantic obsession, the idea of the double, and the seductiveness of evil. Technique studies include the use of suspense instead of surprise, transference of guilt, precise placing of objects in the frame, the bravura range of close-ups, low- and high-angle shots, the obsessive moving camera. Some consideration is paid to more recent Freudian, structuralist, and feminist readings of his work. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Engl 5940)

Spring Qtr Sec 1 **W**—6-9:30, CMU Theater, 1st floor, Russell

ArtH 5991 INTRODUCTION TO MUSEOLOGY. 4 degree credits, \$154 plus \$4 course fee. Total \$158. (◆\$77 plus \$4 course fee. Total \$81)

Survey of the literature in museum studies and investigation of local museums, art centers, and historical societies. (Prereq senior, #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **T**—6:20-8:50, JonesH 207B, Smith

(See also Informal Courses and Professional Improvement Courses)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Credit and noncredit art courses offered statewide

For artists, classroom teachers, administrators, art teacher specialists, paraprofessionals.

Format and scheduling arranged to suit group needs. Usually about 20 students are needed to justify holding a class; this can vary with the content and overall cost of the class. Programs can be designed to deal with a wide scope of current interests and problems.

Topics include: painting and drawing; printmaking; photography; sculpture; ceramics; weaving and dyeing; jewelry making; art history; art appreciation; dealing with hazardous and toxic substances, OSHA regulations, and inexpensive controls; management, grantsmanship, developing local resources.

All can be offered for in-service training in school districts. In addition, topics of particular use to the classroom teacher include: innovative curriculum development; integrating art with other curriculum areas; relating movement, dramatics, music, and art in the classroom; children's artistic development; sensory development and perceptual growth; determining effectiveness; developing art materials from everyday sources; using games to develop art appreciation and art vocabulary; evaluating and grading art achievement.

For further information, call or write Continuing Education in the Arts, 320 Westbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis, MN 55455. (612) 373-4947.

Arts, Studio (ArtS)

College of Liberal Arts

Textbooks for most ArtS courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450).

(See also General College courses in artistic expression; Informal Courses; Continuing Education for Women; and MacPhail Center for the Arts)

*Guy Baldwin, Associate Professor of Art
Karl Bethke, Professor of Art
Linda Brooks, Assistant Professor of Art
Victor Caglioti, Associate Professor of Art
Thomas Cowette, Associate Professor of Art
Terry Davidson, Lecturer in Art
David L. Feinberg, Associate Professor of Art
Gary Hallman, Associate Professor of Art
James Henkel, Associate Professor of Art
Curtis Hoard, Professor of Art
David Husom, Lecturer in Art
Jerald Krepps, Associate Professor of Art
Thomas Lane, Associate Professor of Art
Susan Lucey, Associate Professor of Art
Kevin M. McMahon, Lecturer in Art
Malcolm Myers, Professor of Art
Wayne Potratz, Associate Professor of Art
William Roode, Associate Professor of Art
Thomas Rose, Professor of Art
Herman Rowan, Professor of Art
Herman Somberg, Professor of Art*

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

A MAJOR IN STUDIO ARTS (B.A. OR B.F.A.) 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 studio arts to take some classes during the day in order to graduate. Students considering a major in studio arts should discuss plans with the Studio Arts Coordinator of Advising, 376-3219.

Students majoring in studio arts must take all ArtS and ArTH courses A-N. Grades of A, B, or C are required in the major courses.

B.A. MAJOR SEQUENCE

Required Preparatory Courses:

One art history course at the 1000 level

ArtS 1401, 1101, 1404 or 1104, 1301 or 1302

12 cr from 1102, 1105, 1301 or 1302, 1510, 1520, 1530, 1701, 1811, 1812

ArtS 1401 should be taken before other departmental courses, or concurrently with the other required 1000-level studio arts courses.

Major Requirements

At least 28 cr in studio arts courses at 3000-5000 levels

8 cr in 3000-5000 level art history courses

B.F.A. MAJOR SEQUENCE

This program, leading to a 4-year professional degree, offers an intensive concentration in studio arts work to students who demonstrate superior professional promise. In the B.F.A. program, the student acquires broad knowledge of studio arts, with particular depth in one area of specialization, chosen from the following: drawing/painting, sculpture, printmaking, photography, ceramics/glass. Of 180 degree credits required, 92 credits are taken in studio arts.

College of Liberal Arts studio arts majors may apply to the B.F.A. program after completing the 28 cr of 1000-level required preparatory courses with a B average. Students should apply **before** earning 135 CLA credits. (Transfer students will submit equivalents.) Students accepted to the program are expected to maintain a B average in studio arts courses. Accepted students are subject to review, and candidacy may be terminated if performance is unsatisfactory (in which case the students may transfer to the B.A. program). To apply to the B.F.A. program a student must submit (1) the application form, available in the Studio Arts office, (2) a current University of Minnesota transcript, (3) three confidential faculty evaluations, and (4) five to ten 35mm slides of the student's work. Upon acceptance, the student must discuss a major program with the Coordinator of Advising and must file the major program in the student's divisional office.

Required Preparatory Courses:

ArtS 1101, 1404 or 1104, 1301 or 1302, 1404, 1510 or 1520 or 1530, 1701, 1811. These 28 credits must be completed before application to the B.F.A. program. 12 additional 1000-level studio arts credits (may be completed after admission to the B.F.A. program)

Major Requirements:

28 cr in one studio arts field of specialization

24 cr additional 3000-5000 level studio arts elective (including ArtS 5400 [4 cr])

16 cr art history (minimum 8 cr at the 3000-5000 level)

All B.F.A. candidates are required to have an exhibition of their work during their final senior quarter. A detailed description of the B.F.A. program can be obtained from the Coordinator of Advising.

You need not be majoring in studio arts to register for studio arts courses.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

RESTRICTIONS IN STUDIO ARTS CLASSES

1. Registration in any studio 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 376-3219 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 Westbrook Hall by the end of the third week of the term.

Most studio arts courses require the student to spend a minimum of one hour per week in the studio for each hour spent in class.

Because Extension funds its own classes, and since the subject matter of studio arts courses requires that enrollments be limited to small numbers of students, it has become necessary for Extension Classes to add a \$5 special fee to most classes in order for the classes to be held.

Some studio arts courses require additional fees which cover part of the cost of expendable materials, models, breakage, and special facilities. 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.

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in studio arts. For a copy of the current daytime *Class Schedule* and procedures through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

Commercial Art

The Commercial Art Certificate Program is now offered through the Department of Design. See Design in this Bulletin.

ArtS 1401 INTRODUCTION TO STUDIO ART. See page 98.

★**ArtS 1101 BASIC DRAWING.** 4 degree credits, \$148 plus \$5 course fee and \$5 special fee. Total \$158.

An introduction to studio work; exploration of contemporary and traditional methods. Work from nature, various drawing mediums. **Certain materials must be purchased and brought to the first class meeting. A materials list is available at the Smith and the Williamson Bookstores.** (No prereq. See *Restrictions*, page 96. Limited to 25)

Fall Qtr

Sec 1	M—6:10-9:55, ArtB 160
Sec 2	M—6:10-9:55, Ramsey HS, Roseville
Sec 3	T—6:10-9:55, ArtB 160, Cowette
Sec 4	W—6:10-9:55, ArtB 140
Sec 5	Th—6:10-9:55, ArtB 141, Roode
Sec 6	Sa—8:30 a.m.-12:15, ArtB 160, Cowette

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Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

- Winter Qtr** Sec 7 **M**—6:10-9:55, ArtB 160
 Sec 8 **T**—6:10-9:55, ArtB 140, Caglioti
 Sec 9 **W**—6:10-9:55, ArtB 160
 Sec 10 **Th**—6:10-9:55, ArtB 141, Roode
 Sec 11 **Sa**—8:30 a.m.-12:15, ArtB 160
- Spring Qtr** Sec 12 **M**—6:10-9:55, ArtB 160
 Sec 13 **T**—6:10-9:55, ArtB 160, Cowette
 Sec 14 **W**—6:10-9:55, ArtB 160
 Sec 15 **Th**—6:10-9:55, ArtB 141, Roode
 Sec 16 **Sa**—8:30 a.m.-12:15, ArtB 160, Feinberg

★**Arts 1102 DRAWING.** 4 degree credits, \$148 plus \$5 course fee and \$5 special fee. Total \$158.

Work from life and nature. Introduction to color and pictorial structure. **Certain materials must be purchased and brought to the first class meeting. A materials list is available at the Smith and the Williamson Bookstores.** (Prereq 1101. See **Restrictions**, page 96. Limited to 25)

- Fall Qtr** Sec 1 **W**—6:10-9:55, ArtB 141, Rowan
Winter Qtr Sec 2 **Th**—6:10-9:55, ArtB 140, Feinberg
Spring Qtr Sec 3 **W**—6:10-9:55, ArtB 141, Rowan

★**Arts 1105 BEGINNING PAINTING.** 4 degree credits, \$148 plus \$5 course fee and \$5 special fee. Total \$158.

Introductory course to painting medium. Studio work in various media from nature, still life, and other sources. Emphasis on individual expression and development. **Certain materials must be purchased and brought to the first class meeting. A materials list is available at the Smith and the Williamson Bookstores.** (No prereq. See **Restrictions**, page 96. Limited to 25)

- Fall Qtr** Sec 1 **T**—6:10-9:55, ArtB 161, Feinberg
Winter Qtr Sec 2 **T**—6:10-9:55, ArtB 161, Feinberg
Spring Qtr Sec 3 **T**—6:10-9:55, ArtB 161, Feinberg

★**Arts 1301 BASIC SCULPTURE.** 4 degree credits, \$148 plus \$25 course fee and \$5 special fee. Total \$178.

Beginning course. Intensive study of structure with emphasis on form and space. Construction in metal. (No prereq. See **Restrictions**, page 96. Sec 1, 2 meet concurrently with 3301, 3305, 5310, 5350. Limited to 20)

- Fall Qtr** Sec 1 **M**—6:10-9:55, ArtB 65, Baldwin
Winter Qtr Sec 2 **T**—6:10-9:55, ArtB 65, Baldwin
Spring Qtr Sec 3 **T**—6:10-9:55, ArtB 65, Rose

★**Arts 1302 BASIC SCULPTURE.** 4 degree credits, \$148 plus \$25 course fee and \$5 special fee. Total \$178.

Natural form is studied. Imaginative approaches are encouraged. Construction in clay, plaster, wood. Mold-making and casting. (No prereq. See **Restrictions**, page 96. Limited to 20)

- Winter Qtr** Sec 1 **M**—6:10-9:55, ArtB 50, Potratz
Spring Qtr Sec 2 **M**—6:10-9:55, ArtB 50, Potratz

Read about abbreviations, symbols, and maps on page 60.
 Courses and sections in red have limits on enrollment. See page 20.

ArtS 1401 INTRODUCTION TO STUDIO ART. 4 degree credits, \$148. (♦\$74)

Introduces the student to the concerns, media, and environment of the practicing artist, and to the concepts of visual art making in its contemporary and historical context. Lectures, demonstrations, and discussions provide a broad aesthetic foundation for entering beginning ArtS courses, and a thorough understanding of the creative process, visual expression, and aesthetic criteria. (No prereq. See **Restrictions**, page 96)

Fall Qtr Sec 1 **Th**—6:10-8:40, BlegH 10

Winter Qtr Sec 2 **Th**—6:10-8:40, BlegH 10

Spring Qtr Sec 3 **Th**—6:10-8:40, BlegH 10

★ArtS 1404 (formerly 1104) COLOR. 4 degree credits, \$148 plus \$5 course fee and \$5 special fee. Total \$158.

Introduction to color and pictorial organization. This will provide students with intensive investigation of color and its visual implications. (Prereq 1101. See **Restrictions**, page 96. Limited to 25)

Fall Qtr Sec 1 **T**—6:10-9:55, ArtB 140, Bethke

Winter Qtr Sec 2 **Th**—6:10-9:55, ArtB 140, Bethke

Spring Qtr Sec 3 **Th**—6:10-9:55, ArtB 140, Feinberg

★ArtS 1510 PRINTMAKING: INTAGLIO. 4 degree credits each quarter (maximum 8 credits). \$148 plus \$25 course fee and \$5 special fee. Total \$178 each quarter.

Introduction to various techniques of etching and engraving employed in working on metal plates, as well as collagraphic techniques in creative context. (No prereq. Meets concurrently with 3510, 5510. See **Restrictions**, page 96. Limited to a combined total of 20)

Fall Qtr Sec 1 **T**—6:10-9:55, ArtB 170, Myers

Spring Qtr Sec 2 **T**—6:10-9:55, ArtB 170, Myers

★ArtS 1520 PRINTMAKING: LITHOGRAPHY. 4 degree credits each quarter (maximum 8 cr). \$148 plus \$25 course fee and \$5 special fee. Total \$178 each quarter.

An introduction to planographic printing from stones and plates. Emphasis is directed to the basic techniques of image-making, processing, printing and presentation of prints. (No prereq. Meets concurrently with 3520, 5520. See **Restrictions**, page 96. Limited to a combined total of 20)

Fall Qtr Sec 1 **Th**—6:10-9:55, ArtB 176, Krepps

★ArtS 1530 PRINTMAKING: RELIEF. 4 degree credits each quarter (maximum 8 cr). \$148 plus \$25 course fee and \$5 special fee each quarter. Total \$178 each quarter.

Traditional and contemporary relief printing media. Lino, woodcut, cardboard, metal, and letterpress techniques and their aesthetic applications. (No prereq. Meets concurrently with 3530, 5530. See **Restrictions**, page 96. Limited to a combined total of 20)

Winter Qtr Sec 1 **W**—6:10-9:55, ArtB 175, Bethke

★ArtS 1701 INTRODUCTION TO PHOTO MEDIUM. 4 degree credits, \$148 plus \$20 course fee and \$5 special fee. Total \$173.

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 35 mm camera is

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

acceptable. If you wish to use a camera other than 35 mm and are uncertain whether it will be acceptable, you may check with the Studio Arts department, 373-2847. **Additional materials for the course may cost \$60-\$100.** (No prereq. See **Restrictions**, page 96. Limited to 20)

- Fall Qtr** Sec 1 M—9 a.m.-12:45, MacP Bsmt, Husom (Limit 24)
 Sec 2 M—6:10-9:55, ArtB 120, Brooks
 Sec 3 T—1:00-4:45, MacP Bsmt, Husom (Limit 24)
 Sec 4 T—6:10-9:55, ArtB 120, Henkel
- Winter Qtr** Sec 5 M—1-4:45, MacP Bsmt, Husom (Limit 24)
 Sec 6 M—6-9:45, MacP Bsmt, Husom (Limit 24)
 Sec 7 M—6:10-9:55, ArtB 120, Brooks
 Sec 8 T—6:10-9:55, ArtB 120
 Sec 9 T—6-9:45, MacP Bsmt, Husom (Limit 24)
- Spring Qtr** Sec 10 M—9 a.m.-12:45, MacP Bsmt, Husom (Limit 24)
 Sec 11 M—6:10-9:55, ArtB 120, Henkel
 Sec 12 T—6-9:45, MacP Bsmt, Husom (Limit 24)
 Sec 13 T—6:10-9:55, ArtB 120, Brooks

(See also photography courses in General College and Informal Courses)

- ★**ArtS 1811 CERAMICS.** 4 degree credits, \$148 plus \$20 course fee and \$5 special fee. Total \$173.

Introduction to handbuilding techniques in clay for individual creative expression. (No prereq. See **Restrictions**, page 96. Limited to 28)

- Fall Qtr** Sec 1 M—6:10-9:55, ArtB 10, Lane
Winter Qtr Sec 2 Th—6:10-9:55, ArtB 10, Hoard
Spring Qtr Sec 3 Th—6:10-9:55, ArtB 10, Hoard

- ★**ArtS 1812 CERAMICS.** 4 degree credits, \$148 plus \$20 course fee and \$5 special fee. Total \$173.

Introduction to wheel throwing techniques for individual creative expression. (No prereq. See **Restrictions**, page 96. Limited to 28)

- Fall Qtr** Sec 1 W—6:10-9:55, ArtB 10, Hoard
Spring Qtr Sec 2 W—6:10-9:55, ArtB 10, Hoard

- ★**ArtS 3110 DRAWING.** 4 degree credits each quarter (maximum 12 cr). \$154 plus \$15 course fee and \$5 special fee. Total \$174 each quarter.

Portraiture and life drawing from the model, still life, and nature. **Certain materials must be purchased and brought to the first class meeting. A materials list is available at the Smith and the Williamson Bookstores.** (Prereq 1401, 1102. See **Restrictions**, page 96. Meets concurrently with 5110. Limited to a combined total of 25)

- Fall Qtr** Sec 1 M—6:10-9:55, ArtB 140, Rowan
Winter Qtr Sec 2 M—6:10-9:55, ArtB 140, Rowan
Spring Qtr Sec 3 M—6:10-9:55, ArtB 140, Rowan

- ★**ArtS 3160 WATERCOLOR.** 4 degree credits each quarter (maximum 12 cr). \$154 plus \$10 course fee and \$5 special fee. Total \$169 each quarter.

Introduction to transparent watercolor, gouache, casein, and tempera. General course introducing the student to a variety of drawing and painting mediums. Figure, (continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

still life, landscape, and abstract design. **Certain materials must be purchased and brought to the first class meeting. A materials list is available at the Smith and the Williamson Bookstores.** (Prereq 1101, 1404 or 1104, 1401 or #. Meets concurrently with 5160. See **Restrictions**, page 96. Limited to a combined total of 25)

Fall Qtr Sec 1 M—6:10-9:55, ArtB 141, Myers
Sec 2 T—6:10-9:55, ArtB 141, Caglioti
Winter Qtr Sec 3 M—6:10-9:55, ArtB 141, Myers
Sec 4 T—6:10-9:55, ArtB 141, Caglioti
Spring Qtr Sec 5 M—6:10-9:55, ArtB 141, Myers
Sec 6 T—6:10-9:55, ArtB 141, Caglioti

★**Arts 3301 SCULPTURE: DIRECT METAL.** 4 degree credits, \$154 plus \$25 course fee and \$5 special fee. Total \$184.

Welding and brazing. (Prereq 1301, 1302, 1401. Meets concurrently with 1301, [sec 1, 2], 3305, 5310, 5350. See **Restrictions**, page 96. Combined limit of 20)

Fall Qtr Sec 1 M—6:10-9:55, ArtB 65, Baldwin
Winter Qtr Sec 2 T—6:10-9:55, ArtB 65, Baldwin

★**Arts 3303 SCULPTURE: CAST METAL.** 4 degree credits, \$154 plus \$30 course fee and \$5 special fee. Total \$189.

Lost wax and sand casting in bronze, aluminum, iron. (Prereq 1301, 1302, 1401. Meets concurrently with 5330. See **Restrictions**, page 96. Combined limit of 20)

Fall Qtr Sec 1 T—6:10-9:55, ArtB Bsmt Annex, Potratz

★**Arts 3305 SCULPTURE: KINETICS.** 4 degree credits, \$154 plus \$25 course fee and \$5 special fee. Total \$184.

Constructions, kinetics, electronics. (Prereq 1301, 1302, 1401. Meets concurrently with 1301 [sec 1, 2], 3301, 5310, 5350. See **Restrictions**, page 96. Combined limit of 20)

Fall Qtr Sec 1 M—6:10-9:55, ArtB 65, Baldwin
Winter Qtr Sec 2 T—6:10-9:55, ArtB 65, Baldwin

★**Arts 3420 GLASS: SLUMP AND CAST.** 4 degree credits, \$154 plus \$50 course fee and \$5 special fee. Total \$209.

Processes and technique dealing with slumping and casting of glass. Sheet glass and hot glass techniques. Emphasis on aesthetic achievements and experimentation. (Prereq 1401 and one of the following: 1811, 1812, 1301, 1302, or 3820. See **Restrictions**, page 96. Limited to 20)

Fall Qtr Sec 1 M—6:10-9:55, ArtB 186, Davidson

★**Arts 3430 PAPER: PULP TO PLASTIC EXPRESSION.** 4 degree credits (max 12 cr), \$154 plus \$20 course fee and \$5 special fee. Total \$179.

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, 1xxx-level Studios Arts course. Meets concurrently with 5430. See **Restrictions**, page 96. Limited to a combined total of 20)

Spring Qtr Sec 1 T—6:10-9:55, ArtS 176, Krepps

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

- ★ArtS 3510 **PRINTMAKING: INTAGLIO.** 4 degree credits each quarter (maximum of 12 cr). \$154 plus \$30 course fee and \$5 special fee. Total \$189 each quarter.

A print class for students who have had experience in drawing composition. All techniques of fine printing will be taught and color printing will be demonstrated in engraving and etching. (Prereq 1401, 4 cr of 1510 or #. Meets concurrently with 1510, 5510. See **Restrictions**, page 96. Limited to a combined total of 20)

Fall Qtr Sec 1 T—6:10-9:55, ArtB 170, Myers

Spring Qtr Sec 2 T—6:10-9:55, ArtB 170, Myers

- ★ArtS 3520 **PRINTMAKING: INTERMEDIATE LITHOGRAPHY.** 4 degree credits each quarter (maximum 12 cr). \$154 plus \$30 course fee and \$5 special fee. Total \$189 each quarter.

Further exploration of fundamental techniques with introduction to color printing. Emphasis is directed to a more independent approach, stressing artistic considerations, in terms of materials and the visual manifestation of a statement. (Prereq 1401, 4 cr of 1520 or #. Meets concurrently with 1520, 5520. See **Restrictions**, page 96. Limited to a combined total of 20)

Fall Qtr Sec 1 Th—6:10-9:55, ArtB 176, Krepps

- ★ArtS 3530 **PRINTMAKING: RELIEF.** 4 degree credits each quarter (maximum of 12 cr). \$154 plus \$30 course fee and \$5 special fee. Total \$189 each quarter.

Relief printing techniques; emphasis on color processes. (Prereq 1401, 4 cr of 1530 or #. Meets concurrently with 1530, 5530. See **Restrictions**, page 96. Limited to a combined total of 20)

Winter Qtr Sec 1 W—6:10-9:55, ArtB 175, Bethke

- ★ArtS 3710 **INTERMEDIATE PHOTOGRAPHY.** 4 degree credits each quarter (maximum 12 cr). \$154 plus \$20 course fee and \$5 special fee. Total \$179 each quarter.

Continued work in photographic controls and processes. Introduction to related photosensitive media. Emphasis on creative process with attention to individual interests and requirements. **Additional materials for the course may cost \$60-\$100.** (Prereq 1401, 1701 or #. See **Restrictions**, page 96. Limited to 20)

Fall Qtr Sec 1 M—6-9:45, MacP Bsmt, Husom (Limit 24)

Sec 2 W—6:10-9:55, ArtB 120, Brooks

Sec 3 Th—6:10-9:55, ArtB 120, Brooks

Winter Qtr Sec 4 T—9 a.m.-12:45, MacP Bsmt, Husom (Limit 24)

Sec 5 W—6:10-9:55, ArtB 120, Brooks

Spring Qtr Sec 6 M—6-9:45, MacP Bsmt, Husom (Limit 24)

Sec 7 W—6:10-9:55, ArtB 120, Brooks

- ★ArtS 3810 **CERAMIC DESIGN.** 4 degree credits each quarter (maximum 12 cr). \$154 plus \$25 course fee and \$5 special fee. Total \$184 each quarter.

Greater emphasis on wheel throwing. Advanced design problems and introduction to glaze and clay experimentation. Emphasis on development of personal expression in ceramic medium. (Prereq 1401, 1811, 1812 or #. See **Restrictions**, page 96. Meets concurrently with 5810. Limited to a combined total of 20)

Winter Qtr Sec 1 T—6:10-9:55, ArtB 10, Lane

Spring Qtr Sec 2 T—6:10-9:55, ArtB 10, Lane

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**ArtS 5110 ADVANCED DRAWING.** 4 degree credits each quarter (maximum 16 cr).
\$154 plus \$15 course fee and \$5 special fee. Total \$174 each quarter.

Primarily for painting majors. Drawing in all mediums from life and from imagination; history of drawing. **Certain materials must be purchased and brought to the first class meeting. A materials list is available at the Smith and the Williamson Bookstores.** (Prereq 12 cr of 3110 or #. Meets concurrently with 3110. See **Restrictions**, page 96. Qualified students may register for graduate credit at the University of Minnesota. Limited to a combined total of 25)

Fall Qtr Sec 1 M—6:10-9:55, ArtB 140, Rowan

Winter Qtr Sec 2 M—6:10-9:55, ArtB 140, Rowan

Spring Qtr Sec 3 M—6:10-9:55, ArtB 140, Rowan

★**ArtS 5160 WATERCOLOR.** 4 degree credits each quarter (maximum 16 cr). \$154 plus
\$10 course fee and \$5 special fee. Total \$169 each quarter.

Advanced watercolor techniques, aesthetic directions. Individual concepts and development of sensibilities. **Certain materials must be purchased and brought to the first class meeting. A materials list is available at the Smith and the Williamson Bookstores.** (Prereq 12 cr of 3160 or #. Meets concurrently with 3160. See **Restrictions**, page 96. Qualified students may register for graduate credit at the University of Minnesota. Limited to a combined total of 25)

Fall Qtr Sec 1 M—6:10-9:55, ArtB 141, Myers

Sec 2 T—6:10-9:55, ArtB 141, Caglioti

Winter Qtr Sec 3 M—6:10-9:55, ArtB 141, Myers

Sec 4 T—6:10-9:55, ArtB 141, Caglioti

Spring Qtr Sec 5 M—6:10-9:55, ArtB 141, Myers

Sec 6 T—6:10-9:55, ArtB 141, Caglioti

★**ArtS 5310 SCULPTURE: DIRECT METAL.** 4 degree credits each quarter (maximum of 16
cr). \$154 plus \$25 course fee and \$5 special fee. Total \$184 each quarter.

See description for 3301. (Prereq 3301, #. Meets concurrently with 1301 [sec 1, 2], 3301, 3305, 5350. See **Restrictions**, page 96. Qualified students may register for graduate credit at the University of Minnesota. Combined limit of 20)

Fall Qtr Sec 1 M—6:10-9:55, ArtB 65, Baldwin

Winter Qtr Sec 2 T—6:10-9:55, ArtB 65, Baldwin

★**ArtS 5330 SCULPTURE: CAST METAL.** 4 degree credits each quarter (maximum of 16 cr).
\$154 plus \$30 course fee and \$5 special fee. Total \$189 each quarter.

See description for 3303. (Prereq 3303. Meets concurrently with 3303. See **Restrictions**, page 96. Qualified students may register for graduate credit at the University of Minnesota. Combined limit of 20)

Fall Qtr Sec 1 T—6:10-9:55, ArtB Bsmt Annex, Potratz

★**ArtS 5350 SCULPTURE: KINETICS.** 4 degree credits each quarter (maximum of 16 cr).
\$154 plus \$25 course fee and \$5 special fee. Total \$184 each quarter.

See description for 3305. (Prereq 3305. Meets concurrently with 1301 [sec 1, 2], 3301, 3305, 5310. See **Restrictions**, page 96. Qualified students may register for graduate credit at the University of Minnesota. Combined limit of 20)

Fall Qtr Sec 1 M—6:10-9:55, ArtB 65, Baldwin

Winter Qtr Sec 2 T—6:10-9:55, ArtB 65, Baldwin

ArtS 5400 CONCEPTS IN CONTEMPORARY ART. 4 degree credits. **To be offered 1985-86.**

Discussion of contemporary art trends and theories and their historical precedents. Emphasis on helping students understand their own work and ideas in relation to the
(continued next page)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

larger context of the art world. (Prereq senior and Studio Arts major. See **Restrictions**, page 96. Qualified students may register for graduate credit at the University of Minnesota)

- ★**ArtS 5430 PAPER: PULP TO PLASTIC EXPRESSION.** 4 degree credits each quarter (max 16 cr), \$154 plus \$20 course fee and \$5 special fee. Total \$179 each quarter. See course description for ArtS 3430. (Prereq 12 cr of 3430 or #. Meets concurrently with 3430. See **Restrictions**, page 96. Qualified students may register for graduate credit at the University of Minnesota. Limited to a combined total of 20)
Spring Qtr Sec 1 **T**—6:10-9:55, ArtS 176, Krepps

- ★**ArtS 5510 PRINTMAKING: ADVANCED INTAGLIO.** 4 degree credits each quarter (maximum 16 cr). \$154 plus \$30 course fee and \$5 special fee. Total \$189 each quarter.

An advanced course in etching, aquatint, mezzatint, and all related techniques in the execution of intaglio prints. Color printing will be taught in conjunction with the above material. (Prereq 12 cr of 3510 or #. Meets concurrently with 1510, 3510. See **Restrictions**, page 96. Qualified students may register for graduate credit at the University of Minnesota. Limited to a combined total of 20)

Fall Qtr Sec 1 **T**—6:10-9:55, ArtB 170, Myers

Spring Qtr Sec 2 **T**—6:10-9:55, ArtB 170, Myers

- ★**ArtS 5520 PRINTMAKING: ADVANCED LITHOGRAPHY.** 4 degree credits each quarter (maximum 16 cr). \$154 plus \$30 course fee and \$5 special fee. Total \$189 each quarter.

Strong emphasis in creative and individual approach to lithography. Critiques and discussions are directed to understanding the intrinsic qualities of the lithographic medium. (Prereq 12 cr of 3520 or #. Meets concurrently with 1520, 3520. See **Restrictions**, page 96. Qualified students may register for graduate credit at the University of Minnesota. Limited to a combined total of 20)

Fall Qtr Sec 1 **Th**—6:10-9:55, ArtB 176, Krepps

- ★**ArtS 5530 PRINTMAKING: RELIEF.** 4 degree credits each quarter (maximum of 16 cr). \$154 plus \$30 course fee and \$5 special fee. Total \$189 each quarter.

Relief processes. Letterpress and combined techniques. (Prereq 12 cr of 3530 or #. Meets concurrently with 1530, 3530. See **Restrictions**, page 96. Qualified students may register for graduate credit at the University of Minnesota. Limited to a combined total of 20)

Winter Qtr Sec 1 **W**—6:10-9:55, ArtB 175, Bethke

- ★**ArtS 5810 CERAMICS.** 4 degree credits each quarter (maximum of 16 cr), \$154 plus \$40 course fee and \$5 special fee. Total \$199 each quarter.

Aesthetic awareness and development: techniques and materials. (Prereq 12 cr of 3810 or #. See **Restrictions**, page 96. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3810. Limited to a combined total of 20)

Winter Qtr Sec 1 **Th**—6:10-9:55, ArtB 10, Hoard

Spring Qtr Sec 2 **Th**—6:10-9:55, ArtB 10, Hoard

WINTER QUARTER IN MEXICO

Studio Arts in Mexico: Winter quarter in Cuernavaca, Mexico, cosponsored by the Department of Studio Arts and Extension Classes Office of Study Abroad. Pre-Hispanic, contemporary Mexican folk art provide source of material for studio arts studies; Spanish language instruction. May be applied toward the CLA second language requirements (see page 562). Graduate credit available. (11 to 13 credits)
For information: call Extension Classes Office of Study Abroad at 376-5049.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Astronomy (Ast)

Institute of Technology

Textbooks for most Ast courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

K. Davidson Associate Professor of Physics and Astronomy
E.P. Ney, Regents' Professor of Astronomy

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 **DESCRIPTIVE ASTRONOMY.** 4 degree credits, §1021, §1008, 1009. \$148.

Describes in non-mathematical terms the earth, the moon, the planets, the sun, and the evolution of the solar system; the birth process, life cycle and deaths of stars; pulsars, black holes, and supernova; stellar systems and galaxies; and the origin and development of the universe. (No prereq. A joint Day/Extension class)

Fall Qtr Sec 1 **MW**—6:30-8:15, Phys 166, Davidson

Winter Qtr Sec 2 **MW**—6:30-8:15, Phys 166, Ney

Spring Qtr Sec 3 **MW**—6:30-8:15, Phys 166, Ney

★●Ast 1015 **DESCRIPTIVE ASTRONOMY LABORATORY.** 1 degree credit, §1025, \$37.

Laboratory offered in conjunction with 1011. Opportunity to observe with telescope. Honors sections of Astronomy Laboratory are now available to Extension students. For more information, contact the Astronomy department at 373-3751. **Classes do not meet the first week of the term.** (Prereq high school algebra; high trigonometry recommended. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr Sec 1 **M**—4:15-6, Phys 250
Sec 2 **T**—5:15-7, Phys 250
Sec 3 **T**—7:30-9:30, Phys 250
Sec 4 **W**—4:15-6, Phys 250
Sec 5 **Th**—5:15-7, Phys 250
Sec 6 **Th**—7:30-9:30, Phys 250

Winter Qtr Sec 7 **M**—4:15-6, Phys 143
Sec 8 **T**—5:15-7, Phys 143
Sec 9 **T**—7:30-9:30, Phys 143
Sec 10 **W**—4:15-6, Phys 143
Sec 11 **Th**—5:15-7, Phys 143
Sec 12 **Th**—7:30-9:30, Phys 143

Spring Qtr Sec 13 **M**—4:15-6, Phys 143
Sec 14 **T**—5:15-7, Phys 143
Sec 15 **T**—7:30-9:30, Phys 143
Sec 16 **W**—4:15-6, Phys 143
Sec 17 **Th**—5:15-7, Phys 143
Sec 18 **Th**—7:30-9:30, Phys 143

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**ØAst 1201 TOPICS IN MODERN ASTROPHYSICS.** 4 degree credit, \$148.

Current research problems in astronomy and astrophysics. Discussion and participation by class members. Nonmathematical. (Prereq 1011 or equiv, written #. A joint Day/Extension class limited to 25 Extension students)

Spring Qtr Sec 1 TTh—6-7:30, Phys 236A

Minnesota Starwatch, a taped message on the night sky in Minnesota prepared by the Astronomy Department at the University, can be reached by calling 376-5587.

B

Biochemistry (BioC)

College of Biological Sciences

Textbooks for most BioC courses are available at Books Underground on the St. Paul campus (373-0800).

Robert Glass, Professor of Biochemistry

Huber R. Warner, Professor of Biochemistry

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 376-3000 two weeks before mail registration for that quarter begins.

★**BioC 1301 ELEMENTARY BIOCHEMISTRY I.** 5 degree credits, \$Chem 1002 or 3301, \$185.

The chemistry of carbon compounds that occur in nature. Composition, structures, and properties of the major components of plant, animal, and bacterial cells. (Prereq Chem 1001 or 1005. Limited to 30)

Fall Qtr Sec 1 TTh—6:30-8:30, GorL 239, StP Campus, Glass

★**BioC 1302 ELEMENTARY BIOCHEMISTRY II.** 3 degree credits, \$111.

Biochemical principles; reactions of organic compounds in the living cell. Metabolic pathways, energy considerations, and biosynthetic processes; emphasis on aspects essential to an understanding of plant and animal nutrition and physiology. (Prereq 1301 or Chem 1002. Limited to 30)

Winter Qtr Sec 1 W—6:30-8:45, GorL 239, StP Campus, Glass

Ø**Biol 5001 (formerly BioC 5001 or Biol 3021) BIOCHEMISTRY.** 4 degree credits, \$Biol 3021, \$BioC 5001. *See listing under Biology.*

★**ØBioC 5025 LABORATORY IN BIOCHEMISTRY.** 2 degree credits, \$94.50.

Discussions of techniques and problem-solving approaches illustrated with laboratory experiments and demonstrations. (Prereq Biol 5001 or ¶Biol 5001. 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—5:30-10, SnH 122, StP Campus, Warner

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Biological Sciences

Please see the following alphabetical listings for course offerings:

BIOCHEMISTRY	GENETICS AND CELL
BIOLOGY	BIOLOGY
BOTANY	HEALTH SCIENCES
ECOLOGY AND BEHAVIORAL BIOLOGY	HISTORY OF SCIENCE AND TECHNOLOGY
GENERAL COLLEGE	MICROBIOLOGY

Biology (Biol)

College of Biological Sciences

Textbooks for Biol courses are available at the Minnesota Book Center in Williamson Hall for Minneapolis campus classes (373-3688) and at Books Underground for St. Paul campus classes (373-0800).

*David Biesboer, Assistant Professor of Botany
Peter Chapman, Professor of Biochemistry
William Cunningham, Professor of Genetics and Cell Biology
Murray Rosenberg, Professor of Genetics and Cell Biology
Irwin Rubenstein, Professor of Genetics and Cell Biology
William Schmid, Professor of Ecology and Behavioral Biology*

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, 373-3648. 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 376-3000 two weeks before mail registration for that quarter begins.

★**Biol 1009 (formerly 1011) GENERAL BIOLOGY.** 5 degree credits, \$185 plus \$10 course fee. Total \$195. (IS)

An introduction to the principles of biology. The cell, metabolism, heredity, reproduction, ecology and evolution. Lectures are live. (No prereq. A joint Day/Extension class limited to 120 Extension students)

Fall Qtr Sec 1 **Lect TTh**—6-7:10, AndH 210
Lab TTh—7:20-9, KoltH S167

Spring Qtr Sec 2 **Lect TTh**—6-7:10, AndH 210
Lab TTh—7:20-9, KoltH S167

★**Biol 1103 GENERAL BOTANY.** 5 degree credits, \$3012, \$185.

Levels of organization of plants, plant function, plant growth and development, plant reproduction. (Prereq 1009 or 1011 or #. Limited to 20)

Winter Qtr Sec 1 **Lect TTh**—6:10-7:20, BioSci 6, StP Campus, Biesboer
Lab TTh—7:30-9:30, BioSci 182, StP Campus, Biesboer

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

★**Biol 1106 GENERAL ZOOLOGY.** 5 degree credits, \$185.

Survey of animal phyla; structure, function, behavior, adaptation, and evolutionary relationships. (Prereq 1009 or 1011. A joint Day/Extension class limited to 20 Extension students)

Winter Qtr Sec 1 **Lect T**—7-9:30, Zoology 313, Schmid
Lab Th—7-10, KoltH P168

★**Biol 3011 ANIMAL BIOLOGY.** 5 degree credits, \$Biol 1106, \$236.25.

Comparison of ways different phyla have solved similar physiological problems. Laboratory includes survey of major animal groups and physiological experiments. (Prereq Biol 1009, Chem 1005. Lectures meet concurrently and with 3111. A joint Day/Extension class limited to 44 Extension students)

Fall Qtr Sec 1 **TTh—Lect**, 5:30-7, ClaOff B35, StP Campus, Rosenberg
TTh—Lab, 7-8:45, SnH 13, StP Campus
Sec 2 **TTh—Lect**, 5:30-7, ClaOff B35, StP Campus, Rosenberg
TTh—Lab, 1-2:45, SnH 13, StP Campus
Sec 3 **TTh—Lect**, 5:30-7, ClaOff B35, StP Campus, Rosenberg
TTh—Lab, 3-4:45, SnH 13, StP Campus
Sec 4 **TTh—Lect**, 5:30-7, ClaOff B35, StP Campus, Rosenberg
WF—Lab, 12-1:45, SnH 13, StP Campus

(See also IC 0210, Animal Behavior—Minnesota Zoological Gardens)

⊙**Biol 3051 BIOLOGY AND THE FUTURE OF MAN.** 4 degree credits, \$189.

Nontechnical discussion of biological factors affecting the quality of life, e.g., pollution, chemical and biological warfare, population growth, food supply, resource sufficiency, value of wilderness, genetics and eugenics, public health, aging, behavior control, and biological aspects of ethics, morals, and societal organization. **Must be taken S-N.** (No prereq. A joint Day/Extension class)

Fall Qtr Sec 1 **TTh**—4-5:30, OwreH 2210, Cunningham

⊙**Biol 3111 ANIMAL BIOLOGY.** 4 degree credits, \$Biol 3011, \$189.

Comparative physiology of various animal groups; coordination, movement, support, excretion, reproduction. (Prereq Biol 1009, Chem 1005. Meets concurrently with Biol 3011 lecture. A joint Day/Extension class)

Fall Qtr Sec 1 **TTh**—5:30-7, ClaOff B35, StP Campus, Rosenberg

⊙**Biol 5001 BIOCHEMISTRY.** 4 degree credits, \$Biol 3021, \$BioC 5001, \$189.

Biochemistry and biophysics of cells; emphasis on enzyme catalysis, cellular energetics, biosynthesis of cellular constituents and cellular regulatory mechanisms. (Prereq 1009 or 1011, 12 cr organic chemistry, or #. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **MW**—5:30-7, PalmC 10, StP Campus, Chapman

⊙**Biol 5003 GENETICS.** 4 degree credits, \$GCB 3022, \$GCB 5022, \$189.

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. 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, Zoology 313, Rubenstein

⊙**Biol 5004 CELL BIOLOGY.** 3 degree credits, \$141.75.

Structures and functions of membranes, organelles, and other macromolecular aggregates found in plant, animal, and bacterial cells. Cell form and movement,
(continued next page)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

intercellular communication, transport, and secretion. (Prereq Biol 5001. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 M—5-7:30, PalmC 10, StP Campus, Cunningham

BioC 5025 LABORATORY IN BIOCHEMISTRY. See listing under Biochemistry.

Botany (Bot)

College of Biological Sciences

Textbooks for most Bot courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

(See also Biol 1103, General Botany; and Plant Pathology courses)

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Botany. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

Bot 1012 PLANTS USEFUL TO MAN. 4 degree credits, \$148.

A biological, historical and cultural perspective of the roles that plants have played in human development. (No prereq)

Fall Qtr Sec 1 T—6:30-9:30, Botany B6

Business Administration

Courses through the School of Management

Your attention is called to the School of Management 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
INSURANCE
MANAGEMENT
MANAGEMENT INFORMATION SYSTEMS
MARKETING
OPERATIONS MANAGEMENT
DECISION SCIENCES
TRANSPORTATION

(See also Economics; Comp 0003C, Review of Business English; Rhetoric; Certified Financial Planner, College of Life Underwriters, and Employee Benefits Specialist in Insurance; Professional Improvement Courses; and General College)

For noncredit conferences or seminars in business and management, write or call Continuing Management Education, 338 Nolte Center, 373-3680; Executive Development Center, 324 Management/Economics Building, 373-3837; and Employer Education Service, 417 Management/ Economics Building, 373-5391.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Business, Government, and Society (BGS) School of Management

Textbooks for most BGS courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450).

Lauri John Isaacson, Lecturer in Business, Government, and Society
William S. Seeley, Lecturer in Business, Government, and Society

Business degree students must take Business, Government, and Society courses A-N.

★BGS 3002 BUSINESS AND SOCIETY. 4 degree credits, \$179 plus \$8 course fee. Total \$187.

Examines the strategic and dynamic relations of business and society in a goal-oriented and problem-solving context. Focuses on the interfaces of business institutions with the physical environment, the social milieu, the political process and economic activity. Gives specific attention to the on-going debate regarding national priorities and the respective roles of the private and public sectors concerning the challenges confronting U.S. society. Includes assessment of the concept, determinants, and indicators of the "quality of life" and the social responsibilities of business. (Prereq at least 90 credits completed or in progress. **May not be taken S-N.** Limited to 40)

- Fall Qtr Sec 1 M—5:30-8:15, BlegH 130, Isaacson
- Winter Qtr Sec 2 T—5:30-8:15, BlegH 130, Isaacson
- Spring Qtr Sec 3 M—5:30-8:15, BlegH 130, Seeley
- Sec 4 T—6:15-9, Richfield HS, Isaacson

★BGS 3003 BUSINESS AND THE NATURAL ENVIRONMENT. 4 degree credits, \$179 plus \$8 course fee. Total \$187.

Business and its relationship to the natural environment. The use by industry of renewable and nonrenewable resources. Environmental deterioration caused by businesses to air, land, and water. Business solutions to environmental problems. May emphasize energy in some quarters. (Prereq junior or senior and at least 90 credits completed or in progress. Limited to 35)

- Winter Qtr Sec 1 T—5:30-8:15, BlegH 125, Seeley

★BGS 3004 INTERNATIONAL BUSINESS. 4 degree credits, \$179 plus \$8 course fee. Total \$187. (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)

- Spring Qtr Sec 1 M—5:30-8:15, BlegH 125

Business Finance (See Finance)

Business Law (BLaw)

School of Management

Textbooks for most BLaw courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450).

(See also Informal Courses; Professional Improvement Courses; and General College)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Albert O. Andrews, Jr., Lecturer and Coordinator of Business Law
 Larry Berg, Lecturer in Business Law
 Daniel Blomquist, Lecturer in Business Law
 Donald Campbell, Lecturer in Business Law
 Charles Diessner, Lecturer in Business Law
 Patricia Johnson, Lecturer in Business Law
 Thomas Lovett, Lecturer in Business Law
 Richard A. Peterson, Lecturer in Business Law
 Marcea Staten, Lecturer in Business Law
 Ross L. Thorfinnson, Lecturer in Business Law
 Thomas Thorfinnson, Lecturer in Business Law
 James Van Valkenburg, Lecturer in Business Law
 Peter Weiss, Lecturer in Business Law
 Robert H. Zalk, Lecturer in Business Law

★BLaw 0001C COMMON LEGAL PROBLEMS. 3 certificate credits, \$111 plus \$10 course fee. Total \$121.

Provides a comprehensive course in everyday legal principles, designed to assist the layman in recognizing his legal rights and more intelligently and efficiently managing his personal affairs. This course considers legal problems such as: purchase, sale, rental, or lease of homes and other real property; making of wills and handling of estates; preparation of income tax returns; rights of persons injured in accidents and liability of persons causing accidents; liability for various other types of tortious conduct; making of contracts; sale of personal property; negotiable instruments; formation and operation of small business as a sole proprietorship, partnership or corporation; workmen's compensation laws; rights and responsibilities within family, including divorce; collection of monies through garnishment, attachment, and mechanic's liens; criminal law. (No prereq. Limited to 50)

Fall Qtr Sec 1 **Th**—6:20-8:50, FordH 115, R Thorfinnson

Spring Qtr Sec 2 **Th**—6:20-8:50, FordH 115, T Thorfinnson

(See also IC 0574, Small Landlords' Rights, Remedies and Obligations to Tenants)

★BLaw 0098C BUSINESS LAW—LAW OF REAL PROPERTY. 3 certificate credits, \$111 plus \$10 course fee. Total \$121.

The study of the nature and classification of real estate; deeds and conveyances; landlord and tenant; recording and abstracting; torrens titles; mortgages; wills; probating of estates, etc. (No prereq. Limited to 35)

Spring Qtr Sec 1 **Th**—6:20-8:50, FordH 130, R A Peterson

★BLaw 3058 INTRODUCTION TO LAW, AND THE LAW OF CONTRACTS AND AGENCY. 4 degree credits, \$179 plus \$10 course fee. Total \$189. (IS)

Study of origin, history and development of law, systems of courts, legal procedure, and extensive study of law of contracts, the basic law affecting business transactions; and the law of the relationship of principal and agent, master and servant, employer and employee. **May not be taken S-N.** (Prereq Econ 1002 or equivalent and at least 90 credits completed or in progress. Limited to 45)

Fall Qtr Sec 1 **M**—6:20-8:50, BlegH 245, Lovett

Sec 2 **T**—6:20-8:50, BlegH 360, Campbell

Sec 3 **W**—6:20-8:50, Law 3, Berg

Sec 4 **Th**—6:20-8:50, BlegH 105, Diessner

Sec 5 **Th**—7-9:30, Minnetonka HS,

Van Valkenburg (Limit 30)

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

- Winter Qtr** Sec 6 **M**—6:20-8:50, BlegH 105, Andrews
 Sec 7 **T**—7-9:30, BlegH 215, Blomquist
 Sec 8 **W**—6:20-8:50, BlegH 105, Zalk
 Sec 9 **Th**—7-9:30, Richfield HS 145, Johnson (Limit 35)
- Spring Qtr** Sec 10 **M**—6:20-8:50, BlegH 120, Andrews
 Sec 11 **T**—7-9:30, Robbinsdale/Armstrong HS C-258, Plymouth,
 Diessner (Limit 30)
 Sec 12 **Th**—6:20-8:50, BlegH 120, Zalk

★BLaw 3078 LAW: PARTNERSHIPS, CORPORATIONS, AND REAL PROPERTY. 4 degree credits, \$179 plus \$10 course fee. Total \$189. (IS)

Partnerships, corporations, and the law of real property, including nature, creation, and terms of the relations, rights and liabilities of parties involved in business associations; together with study of the basic concepts and principles of real property law. (Prereq 3058 and at least 90 credits completed or in progress. Limited to 40)

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

Winter Qtr Sec 2 **W**—6:20-8:50, BlegH 235, Staten

★BLaw 3088 LAW OF PERSONAL PROPERTY, SALES CONTRACTS, COMMERCIAL PAPER, AND WILLS AND ESTATES. 4 degree credits, \$179 plus \$10 course fee. Total \$189. (IS)

Study of the basic concepts of personal property, including rights of possessors, bailees, holders of security interests, etc.; and extensive study of the law of sales of goods contracts, and law of commercial paper under the Uniform Commercial Code, together with a brief study of the law of wills and estates. (Prereq 3058 and at least 90 credits completed or in progress. Limited to 40)

Fall Qtr Sec 1 **M**—6:20-8:50, AndH 230, Blomquist

Spring Qtr Sec 2 **M**—6:20-8:50, BlegH 150, Blomquist

Chemical Dependency Counseling

(See Family Social Science)

C

Chemistry (Chem)

Institute of Technology

Textbooks for most Chem courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

(See also Professional Recognition Program in Engineering and Science, page 187)

J.F. Cohen, Lecturer in Chemistry

L.E. Conroy, Associate Professor of Chemistry

M.D. Duerst, Lecturer in Chemistry

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

A \$20 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. Charges for laboratory material and breakage will be punched out of the \$20 deposit card. The balance will be returned to the student at the end of the semester.

★**Chem 1004-1005† GENERAL PRINCIPLES OF CHEMISTRY.** 5 degree credits each semester, \$185 plus \$5 special fee. Total \$190 each semester.

An introduction to chemistry from the standpoint of atomic structure; periodic properties of the elements and compounds derivable from structural considerations; a study of the laws governing the behavior of matter, theories of solutions, acids, bases, and equilibrium; introduction to chemistry of carbon compounds. (Prereq elementary algebra, higher algebra, trigonometry, H.S. chemistry required. H.S. physics strongly recommended for 1004; 1004 for 1005. Limited to 200)

Fall Sem 1004 Sec 1 Lect T—6:20-8:30, SciCB 375, Conroy
Lab Th—6:10-9:40, SciCB 375*

Spring Sem 1005 Sec 2 Lect T—6:20-8:30, SciCB 375, Conroy
Lab Th—6:10-9:40, SciCB 375*

*SmithH 110, 210 as announced by instructor after the first week

★**Chem 3100 QUANTITATIVE ANALYSIS.** 3 degree credits, 3100-3101†, \$139.50.

A survey of quantitative methods of analysis. Lecture. Not for chemistry majors. (Prereq 1005. Limited to 50 students)

Fall Qtr Sec 1 M—6:30-8:45, SciCB 375, Duerst

Students interested in taking Quantitative Analysis Laboratory (Chem 3101†) should be aware that the course is not available through Extension. However, Extension students are able to register for the regular day school sections through the Extension Division for fall quarter, spring quarter, and first summer session. Extension students interested in taking this course would have to accommodate themselves to the regularly scheduled laboratory periods during these quarters. Laboratory sessions are usually offered two days a week from 8:15 a.m. to 11:15 or 1:15 p.m. to 4:15.

★**Chem 3301-3302 ELEMENTARY ORGANIC CHEMISTRY LECTURE I-II.** 4 degree credits each semester, \$3331 for 3301, \$186 each semester.

Important classes of organic compounds, both aliphatic and aromatic, together with some heterocyclic compounds. (Prereq 1005 or 1032 or equivalent for 3301; 3301, 3305 or ¶3305 for 3302. Limited to 60)

Fall Sem 3301 Sec 1 Lect MW—6:10-7:25, SciCB 325, Cohen

Spring Sem 3302 Sec 2 Lect MW—6:10-7:25, SciCB 375, Cohen

★**Chem 3305-3306 ELEMENTARY ORGANIC CHEMISTRY LABORATORY I-II.** 2 degree credits each semester, \$93 plus \$5 special fee. Total \$98 each semester.

Laboratory work includes the preparation of typical substances treated in 3301-3302. **Room assignment will be announced in 3301-3302 lecture.** (Prereq 3301 or ¶3301 for 3305, 3302 or ¶3302 for 3306. Limited to 49)

Fall Sem 3305 Sec 1 Lab Th—6:10-9:40, Cohen

Spring Sem 3306 Sec 2 Lab Th—6:10-9:40, Cohen

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Chicano Studies (Chic)

College of Liberal Arts

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 376-3000 two weeks before mail registration for that quarter begins.

Child and Adolescent Psychiatry (CAPy)

Medical School

Textbooks for most CAPy courses are available at the Health Sciences Bookstore (376-4007).

Paula J. Clayton, M.D., Professor and Head, Department of Psychiatry

Susan E. Erbaugh, Ph.D., Assistant Professor, Child and Adolescent Psychiatry

Barry D. Garfinkel, M.D., Associate Professor and Director of Child and Adolescent Psychiatry

Donna Gedo, Instructor, Child and Adolescent Psychiatry

Jonathan Jensen, M.D., Assistant Professor, Child and Adolescent Psychiatry

Richard A. Miner, M.D., Assistant Professor, Child and Adolescent Psychiatry

James Mitchell, M.D., Assistant Professor, Department of Psychiatry

JoAnne Pearson, M.D., Assistant Professor, Child and Adolescent Psychiatry

George Realmuto, M.D., Assistant Professor, Child and Adolescent Psychiatry

Avi Yellin, Ph.D., Associate Professor, Child and Adolescent Psychiatry

CAPy 5604 PSYCHOPATHOLOGY OF CHILDHOOD. 3 degree credits, \$186.

Intended for nonmedical professionals working with emotionally or behaviorally disordered children and youth. An overview of psychopathology, relative to normal development, is presented including diagnostic procedures and treatment overview. Specific topics discussed include family pathology, psychosis, child abuse and neglect, incest, depression, psychophysiological and psychosomatic disorders. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Th**—4:15-6:15, Zoology 102, Garfinkel

CAPy 5605 PSYCHOPATHOLOGY OF ADOLESCENTS. 3 degree credits, \$186.

A continuation of 5604 focusing on emotionally disturbed adolescents. Topics include developmental framework, the diagnostic process, common problems of adolescence, the borderline adolescent, psychosis, depression and suicide in adolescents, patterns of family interaction, and treatment. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—4:15-6:15, Zoology 102, Garfinkel

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

The following series of workshops is intended to offer in-depth information on specific topics. A relevant paper is required for graduate credit. Please call Workshop Coordinator, Donna Gedo, at 373-8871 with questions; or write her at Box 95 Mayo, University of Minnesota, 420 Delaware Street S.E., Minneapolis, MN 55455.

CAPy 5606 WORKSHOP: SCHOOL REFUSAL AND THE SCHOOL PHOBIC CHILD. 1 degree credit, \$62.

A one-day workshop on the school phobic: characteristic behavior patterns of the child and family, interventions and treatment strategies including techniques for school personnel, follow-up studies. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Spec Term Sec 1 T—Oct. 16, 1984. Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, BellMus Aud, Erbaugh, Garfinkel

No late fee through Oct. 9

CAPy 5607 WORKSHOP: ADOLESCENT: FREEDOM AND/OR FAILURE. 1 degree credit, \$62.

A one-day workshop covering issues of normal growth and development of adolescents; psychopathology developed during childhood and carried into adolescence; pathology resulting from failure to master the tasks of adolescence, intervention, and treatment strategies. Selected case studies are presented. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Spec Term Sec 1 W—May 15, 1985. Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MMA Aud, Realmuto, Garfinkel

No late fee through May 8

CAPy 5612 WORKSHOP: DEPRESSION AND SELF-DESTRUCTIVE BEHAVIORS IN CHILDREN AND ADOLESCENTS. 1 degree credit, \$62.

A one-day workshop covering characteristics of depression in children and adolescents, symptoms and meaning, self-destructive behaviors, dynamics of suicide, crisis intervention, treatment and management considerations. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Spec Term Sec 1 M—Mar. 11, 1985. Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MMA Aud, Garfinkel, Jensen

No late fee through Mar. 4

CAPy 5616 WORKSHOP: DEATH AND DYING: IMPLICATIONS FOR CHILDREN AND ADOLESCENTS. 1 degree credit, \$62.

Child's view of death across developmental stages; reaction to illness and death, and loss of a parent or loved one; parent's reaction to loss of a child's impact on siblings; ways of coping; how to support children/adolescents in these situations. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Spec Term Sec 1 Th—Apr. 18, 1985. Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MMA Aud, Pearson, Jensen

No late fee through Apr. 11

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

CAPy 5620 WORKSHOP: HYPERACTIVITY AND ATTENTION DEFICIT DISORDER OF CHILDREN, ADOLESCENTS, AND ADULTS. 1 degree credit, \$62.

A one-day workshop on attention deficits in children, adolescents, and adults covering diagnostic strategies and issues as well as treatment interventions for family, physician, and school. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Spec Term Sec 1 Th—Dec. 6, 1984. Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MMA Aud, Garfinkel, Yellin

No late fee through Nov. 29

CAPy 5621 WORKSHOP: EATING DISORDERS IN CHILDREN AND ADOLESCENTS. 1 degree credit, \$62.

Provides a framework for the assessment and management of these serious and common eating disorders. Explores theories of etiology, individual and family psychodynamics, medical complications, the relationship to depression, and prognosis. Emphasis on practical aspects of treatment: individual and family psychotherapy, behavior and group therapy, pharmacotherapy, and inpatient management. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Spec Term Sec 1 M—Jan. 21, 1985. Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MMA Aud, Miner, Mitchell

No late fee through Jan. 14

CAPy 5622 WORKSHOP: CONDUCT DISORDERS. 1 degree credit, \$62.

The origins and presentation of conduct disorder are explored. The effect of developmental state on the symptoms of conduct disorder is explained, and consequences for the child outlined. Treatment both outpatient, inpatient, and residential/foster care are discussed. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Spec Term Sec 1 M—Nov. 12, 1984. Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MMA Aud, Garfinkel, Jensen

No late fee through Nov. 5

CAPy 5623 WORKSHOP: SUICIDE: CHILDREN, ADOLESCENTS, AND FAMILIES. 1 degree credit, \$62.

Reviews prevalence of suicide in children and adolescents. Discusses the early warning signs of depression and suicidal behavior, the recognition of depression and suicide in the classroom, how to work with families who have lost children to suicide. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Spec Term Sec 1 T—Feb. 12, 1985. Late registrations accepted with \$5 late fee from 8 to 8:30 a.m. Workshop runs from 8:30 a.m. to 3:30, MMA Aud, Garfinkel, Clayton

No late fee through Feb. 5

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Child Psychology (CPsy)

College of Education

(Institute of Child Development)

Textbooks for most CPsy courses are available at the Minnesota Book Center in Williamson Hall (373-3688). Joint Day/Extension courses are listed only under "Day School" in the bookstore.

(See also Youth Studies)

Bruce L. Bobbitt, Lecturer, Institute of Child Development

Leonard Breslow, Assistant Professor, Institute of Child Development

W. Andrew Collins, Professor, Institute of Child Development

Judith Garber, Lecturer in Child Psychology

Seymour Gross, Clinical Associate Professor, Department of Health Care Psychology and Director of Mental Health Services, Pilot City Health Center

Megan Gunnar, Associate Professor, Institute of Child Development

Harold Ireton, Associate Professor, Department of Family Practice and Community Health, and Health Care Psychology

Michael Maratsos, Professor, Institute of Child Development

Anne Mooney-McLoone, Lecturer in Child Psychology

James Morgan, Assistant Professor, Institute of Child Development

José Nañez, Lecturer in Child Psychology

Carolyn Palmer, Lecturer in Child Psychology

Van Pancake, Lecturer in Child Psychology

Anne Pick, Professor, Institute of Child Development

James E. Turnure, Professor, Department of Educational Psychology

Carolyn Williams, Assistant Professor, Adolescent Health Program and Health Care Psychology

A MAJOR IN CHILD PSYCHOLOGY (CLA) CAN BE COMPLETED IN THE EVENING.

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

B.A. Major Sequence

Required Preparatory Courses:

Psy 1001 or 5 cr of introductory psychology; Psy 1004; Psy 1005 or CPsy 3308 (4 cr); CPsy 1301

Major Requirements:

Minimum of 32 credits in 3000- or 5000-level to include one course from 3302, 3303, 3304 or 5303; Psy 3801 or equivalent, and CPsy 3308 or Psy 1005; 2 courses from 3331, 3332, 3343, 5329, 5331, 5341, 5343, 5345; 2 courses from 3311, 3313, 5311, 5313, 5315, 5319, 5333, 5334, 5335, 5339; Senior Project; a minimum of 8 additional credits from any two or more 3000 or 5000 CPsy courses.

B.S. Major Sequence

Required Preparatory Courses:

Psy 1001, 1004; CPsy 1301

Major Requirements:

Minimum of 59 cr in 3000- or 5000-level courses to include one course from 3302, 3303 or 5303, 3304, 3308; Psy 3801; Soc 5821 or EPsy 5240; Soc 3811 or EPsy 5281; two courses from 3343 or 5343, 5341, 5345, 5347; two courses from 3331 or 5331,

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

3332, 5333, 5335, 5339; two courses from 3311 or 5311, 3313 or 5313, 5315, 5319, 3330, 5334; Senior Project; minimum of 8 additional cr in any 3000 and 5000 child psychology courses; and 24 cr in supportive field courses. 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 call Extension Counseling, 373-3905.

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

Child Psychology courses not used toward a major may be taken A-N or S-N in CLA.

OCPsy 1301 INTRODUCTORY CHILD PSYCHOLOGY. 4 degree credits, \$5301, \$148. (IS)

Introduction to the science of child behavior; review of theories and research. (Prereq 5 cr introductory psychology. Sec 1, 2, and 3 meet concurrently with 3309, sec 1, 2, and 4. A joint Day/Extension class)

Fall Qtr Sec 1 **T**—6:20-8:50, EltH N119, Nañez

Winter Qtr Sec 2 **W**—6:20-8:50, Arch 55, Breslow

Spring Qtr Sec 3 **Th**—6:20-8:50, ChDev 216, Maratsos

(See also Youth Studies)

OCPsy 3302 INFANCY. 4 degree credits, \$189.

Perceptual, motor, emotional, social, and cognitive development during the first two years of life; the developing infant in his social and physical environment. **May be taken S-N.** (Prereq 1301 or #. A joint Day/Extension class)

Fall Qtr Sec 1 **Th**—6:20-8:50, WullH 230, Palmer

OCPsy 3303 ADOLESCENT PSYCHOLOGY. 4 degree credits, \$5303, \$189.

Physical, cognitive, and social development during adolescence. (Prereq 5 cr introductory psychology. Meets concurrently with 5303. A joint Day/Extension class)

Spring Qtr Sec 1 **T**—6:20-8:50, BuH 120, Collins

OCPsy 3309 INTRODUCTORY CHILD PSYCHOLOGY FOR THE SOCIAL SCIENCES. 4 degree credits, \$1301, \$5301, \$189.

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. Sections 1, 2, and 4 meet concurrently with 1301. Section 3 meets concurrently with 5301. A joint Day/Extension class)

Fall Qtr Sec 1 **T**—6:20-8:50, EltH N119, Nañez

Winter Qtr Sec 2 **W**—6:20-8:50, Arch 55, Breslow

Spring Qtr Sec 3 **M**—6:20-8:50, WullH 230, Maratsos

Sec 4 **Th**—6:20-8:50, ChDev 216, Maratsos

OCPsy 3311 BEHAVIORAL AND EMOTIONAL PROBLEMS. 4 degree credits, \$5311, \$189.

Description, etiology, development of behavioral and emotional problems of children; treatment where germane. Excluded are problems deriving primarily from
(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

sensory or physical handicap, mental retardation, or neurological impairment. (Prereq 1301 or equivalent. Meets concurrently with 5311. A joint Day/Extension class)

Winter Qtr Sec 1 **T**—6:20-8:50, FolH 308, Ireton

OCPsy 3313 PSYCHOLOGY OF ATYPICAL CHILDREN. 4 degree credits, \$5313, \$189.

Problems of research, assessment, and behavior associated with atypicality, evaluation of research in areas of major concern for sensory, language, intellectual, and physical deviation. **May be taken S-N.** (Prereq 1301 or equivalent. Meets concurrently with 5313. A joint Day/Extension class)

Spring Qtr Sec 1 **W**—6:20-8:50, ChDev 216, Garber

★OCPsy 3330 DIRECTED EXPERIENCES. 1-4 credits. 4 degree credits this offering, \$189.

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. **Focus this offering:** active participation with an age group. **May be taken S-N.** (Prereq 1301 or equivalent. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr Sec 1 **T**—6:20-8:50, ChDev 218, Mooney-McLoone

OCPsy 3331 PROCESSES OF SOCIALIZATION OF CHILDREN. 4 degree credits, \$5331, \$189.

Processes of social learning; identification, social influence, imitation, reward and punishment, internalization, and object choice. (Prereq 1301 or equivalent. Meets concurrently with 5331. A joint Day/Extension class)

Winter Qtr Sec 1 **Th**—6:20-8:50, BuH 120, Pancake

OCPsy 3343 INTRODUCTION TO COGNITIVE DEVELOPMENT. 4 degree credits, \$189.

Development of cognitive processes with an emphasis on research, methodology, and contrasting theoretical perspectives. **May be taken S-N.** (Prereq 1301 or equivalent. A joint Day/Extension class)

Spring Qtr Sec 1 **M**—6:20-8:50, ChDev 105, A Pick

OCPsy 5301 ADVANCED CHILD DEVELOPMENT. 4 degree credits, \$1301 or 8301, \$189.

Theory and research in child development, with emphasis on perception, language, learning, cognition, personality, and social development in children. **May be taken S-N.** (Prereq 5 cr introductory psychology; primarily for non-majors. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3309, sec 3. A joint Day/Extension class)

Spring Qtr Sec 1 **M**—6:20-8:50, WullH 230, Maratsos

OCPsy 5303 ADOLESCENT PSYCHOLOGY. 4 degree credits, \$3303, \$189. (IS)

See 3303 for description. **May be taken S-N.** (Prereq 5 cr introductory psychology. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3303. A joint Day/Extension class)

Spring Qtr Sec 1 **T**—6:20-8:50, BuH 120

(See also related courses in Social Work)

See also Television Course, CPsy 5305, Multidisciplinary Perspectives on Aging, p. 551.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

OCPsy 5311 BEHAVIORAL AND EMOTIONAL PROBLEMS. 4 degree credits, \$3311, \$189.

See 3311 for description. **May be taken S-N.** (Prereq CPsy 1301 or equiv. Meets concurrently with 3311. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 T—6:20-8:50, FolH 308, Ireton

OCPsy 5313 PSYCHOLOGY OF ATYPICAL CHILDREN. 4 degree credits, \$3313, \$189.

See CPsy 3313 for description. **May be taken S-N.** (Prereq 1301 or equivalent. Meets concurrently with 3313. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 W—6:20-8:50, ChDev 216, Garber

★OCPsy 5315 INTRODUCTION TO MENTAL RETARDATION. 4 degree credits, \$EPsy 5620, \$PSys 5120, \$189.

Psychological and educational problems related to the mentally retarded. **May be taken S-N.** (Prereq 1301 or equivalent. Meets concurrently with EPsy 5620. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to a combined total of 25 Extension students)

Spring Qtr Sec 1 T—4:15-8, ChDev 216, Turnure

OCPsy 5319 CLINICAL PROCEDURES WITH CHILDREN AND YOUTH. 4 degree credits, \$189.

Survey of assessment and intervention procedures of child clinical psychology in clinical and community settings. Primarily for students not majoring in clinical psychology. **May be taken S-N.** (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.-11:30, BuH 123, Gross

OCPsy 5331 PROCESSES OF SOCIALIZATION OF CHILDREN. 4 degree credits, \$3331, \$189.

See CPsy 3331 for description. (Prereq 1301 or equivalent. Meets concurrently with 3331. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 Th—6:20-8:50, BuH 120, Pancake

OCPsy 5339 PARENT-CHILD RELATIONS. 4 degree credits, \$189.

Discussion of parent-child relationships and evaluation of relevant research (e.g., cross-cultural child rearing perspectives, alternative parenting roles, economics of parent-child relations, rights of parents and children). **May be taken S-N.** (Prereq 3331 or 5331. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 T—6:20-8:50, FolH 50, Bobbitt

OCPsy 5345 LANGUAGE DEVELOPMENT. 4 degree credits, \$189.

Development of structure and function of language; factors influencing development; methodological problems, language scales, theories. **May be taken S-N.** (Prereq 1301 or #. 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, ChDev 105, Morgan

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Chinese

(See East Asian Studies)

Civil Engineering (CE)

Institute of Technology

Textbooks for most CE courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

(Your attention is called to the Professional Recognition Program in Engineering and Science, page 187)

C. Edward Bowers, Professor of Civil and Mineral Engineering
Ladislav Cerny, Associate Professor of Civil and Mineral Engineering
David Ching, Lecturer in Civil and Mining Engineering
Theodore Galambos, Professor of Civil and Mineral Engineering
Matthew J. Huber, Associate Professor of Civil and Mineral Engineering
Gerald W. Johnson, Associate Professor of Civil and Mineral Engineering
Walter K. Johnson, Professor of Civil and Mineral Engineering
Arthur W. LaChapelle, Lecturer in Civil and Mineral Engineering
John Rosholt, Adjunct Professor of Civil and Mineral Engineering
Edward Silberman, Professor of Civil and Mineral Engineering
Eugene Skok, Adjunct Assistant Professor of Civil and Mineral Engineering
Charles Song, Professor of Civil and Mineral Engineering
Heinz Stefan, Professor of Civil and Mineral Engineering
Yorgos J. Stephanedes, Assistant Professor of Civil and Mineral Engineering
Ray Sterling, Director, Underground Space Center
Catherine Wolfram, Assistant Professor of Civil and Mineral Engineering
Robert J. Yourzak, Adjunct Assistant Professor of Civil and Mineral Engineering

Your attention is called to the Undergraduate Development Certificate in Civil Engineering—90 credits, page 607.

Through registration in Extension Classes, students may earn, over a period of four years, all Civil Engineering credits required for a B.S. in Civil Engineering. See page 571 for course options.

Joint Day/Extension Classes

You may register through Extension for all Day School classes scheduled before 4 p. m. in Civil Engineering. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

CE 0005 REFRESHER COURSE FOR CIVIL ENGINEERS. No credit, \$148.

This course is for practicing engineers and consists of lectures and problem sessions relating to highways, soils, sanitary, structural and hydraulic engineering. **Must be taken S-N.** (Prereq BCE or equivalent degree or completion of Parts I and II of the State Board Examination)

Winter Qtr Sec 1 T—6:10-9:30, CivMinE 212, Cerny, Huber, G Johnson, W Johnson, Skok, Song

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

CE 3050 ENGINEERING INTERN WORK ASSIGNMENT. 4 degree credits each quarter, \$186 each quarter.

Grades based on formal written report by the student covering his or her work during the professional assignment. **Must be taken S-N.** (Prereq registration in intern program. To obtain instructor's written consent to enter program, go to CivMinE 234)

CE 3051 ENGINEERING INTERN WORK ASSIGNMENT (Second Year.) 4 degree credits each quarter, \$186 each quarter.

Grades based on formal written report by the student covering his or her work during the second-year professional assignment. **Must be taken S-N.** (Prereq registration in intern program. To obtain instructor's written consent to enter program, go to CivMinE 234)

CE 3200 INTRODUCTION TO TRANSPORTATION ENGINEERING. 4 degree credits, \$186.

Application of the physical laws of motion and energy as they relate to calculations of resistances to motion, power, and energy requirements, acceleration-deceleration limits and capacity of various modes of transportation. (Prereq Phys 1271 or equivalent)

Fall Qtr Sec 1 T—6:15-9:30, ExpE 193, Stephanedes

CE 3400 FLUID MECHANICS. 4 degree credits, \$AEM 5200, \$186.

Fluid properties, fluid statics for liquids and gases. Kinematics of fluid flow. Viscous effects. Introduction to incompressible and compressible duct flow, boundary layers, lift and drag, potential flow. Fluid measurements. (Prereq Math 3221, AEM 1015 or AEM 3016)

Fall Qtr Sec 1 **W—Lect**, 6:15-8:45, ExpE 193, Stefan
Sa—Lab, Arr

CE 5001 BUILDING AND CONSTRUCTION CONTRACTS AND SPECIFICATIONS. 4 degree credits, \$186.

Overview of the law of contracts, sales, agency, negotiable instruments, real property, personal property, partnerships, corporations, insurance contracts, worker's compensation, labor law, mechanics' liens, government construction contracts, and torts with applications to the performance of engineering and construction contracts. (Prereq 3rd yr or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **MTh**—5-6:45, CivMinE 212, Rosholt

CE 5002 ENGINEERING ECONOMICS. 2 degree credits, \$93.

Time value of money; compound amount factors; present worth of uniform and single payments; cost-benefit analysis; net present worth analysis; internal rate of return. (Prereq IT junior standing. May not be taken for graduate credit)

Fall Qtr Sec 1 T—6-8, CivMinE 212, Huber

CE 5304 DESIGN OF HIGHWAY AND AIRPORT PAVEMENTS. 4 degree credits, \$186.

Theories of pavement design, flexible and rigid; equivalent wheel loads. Strength tests and frost action. Design procedures for flexible and rigid pavements. (Prereq 3300, 3700. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **TTh**—4:15-6, CivMinE 213, Skok

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

☉CE 5420 INTRODUCTION TO WATER RESOURCES MANAGEMENT. 4 degree credits, \$186.

U.S. and world water resources; human water use; economic, environmental, social, and political problems related to water. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **MWF**—8:15 a.m.-9, CivMinE 205, Silberman

CE 5530 MODELING AND PROCESS CONTROL OF WATER AND WASTE WATER TREATMENT. 4 degree credits, \$186.

new

Mathematical modeling and simulation of water and waste water treatment processes; introduction to control theory, design of control systems and their application to computer-aided process control. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **T**—6:10-9:30, CivMinE 214, Ching

CE 5580 INTRODUCTION TO ENVIRONMENTAL LAW FOR ENGINEERS I. 4 degree credits, \$186.

Study of common statutory and regulatory law relevant to the work of civil and environmental engineers; the history and development of environmental control with emphasis on public policies behind decision making in courts, legislatures, and administrative agencies and tribunals. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **T**—6:10-9:30, CivMinE 213, LaChapelle

CE 5581 INTRODUCTION TO ENVIRONMENTAL LAW FOR ENGINEERS II. 4 degree credits, \$186.

Continuation of CE 5580 with emphasis on specific provisions of federal and Minnesota statutory and regulatory law such as NEPA, TOSCA, RCRA, the Clean Air Act and the Minnesota Environmental Rights Act, and the history of these acts in the courts. (Prereq 5580. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **T**—6:10-9:30, CivMinE 213, LaChapelle

☉CE 5612 DESIGN OF METAL STRUCTURES—INTERMEDIATE. 4 degree credits, \$186.

new

Design of complete metal structures; plant girder bridges, industrial buildings, multistory frames. (Prereq 5610. 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, CivMinE 205, Galambos

☉CE 5613 INTERMEDIATE REINFORCED CONCRETE DESIGN. 4 degree credits, \$186.

new

Eccentrically loaded columns. Shear-friction, design of brackets, deep beam design. Continuous beams and frames. Combined and continuous footings. Retaining walls. Combination of shear and torsion. Two-way slabs. (Prereq 5611. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **TTh**—4-6, CivMinE 213, Wolfgram

☉CE 5617 DESIGN OF MASONRY STRUCTURES. 4 degree credits, \$186.

new

Masonry materials and their production; mortars and grouts; design of non-reinforced and reinforced masonry structural systems; walls; columns; lintels;

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

arches. Code and specification, testing in inspection. (Prereq 5600. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 MW—4-6, CivMinE 213, Cerny

CE 5701 CEMENTED MATERIAL PROPERTIES: EVALUATION AND MIXTURE DESIGN. 4 degree credits, \$186.

Characteristics and performance evaluation concept of construction materials, properties, and design of cemented mixtures such as concrete, bituminous mixtures, stabilized soils, and rocks. (Prereq 3700. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 MW—4:15-6, CivMinE 213, Skok

CE 5702 MANUFACTURE AND QUALITY CONTROL OF CONSTRUCTION MATERIALS. 4 degree credits, \$186.

Methods of manufacture, especially of cemented materials such as concrete, stabilized soils and rock; expected variations and quality control concepts, optimization techniques developed to establish procedures and best materials to use for a given situation. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 MW—4:15-6, CivMinE 212, Skok

★CE 5703 PROJECT MANAGEMENT. 4 degree credits, \$186.

A broad practical understanding of design and construction project management—including project planning, scheduling, budgeting, staffing, task and cost control, and communicating with/motivating/managing team members. (Prereq at least senior standing. Qualified students may register for graduate credit at the University of Minnesota. Limited to 35)

Spring Qtr Sec 1 M—6:10-9:45, CivMinE 213, Yourzak

Classical Civilization

A MAJOR IN CLASSICAL CIVILIZATION CAN BE COMPLETED IN THE EVENING.

Those courses required in the major are offered every 4 years. Interested students should discuss plans with an Extension counselor (373-3905).

Classical Civilization is an interdisciplinary major. This year Extension courses which apply toward the fulfillment of major requirements are offered in classics, art history, philosophy, humanities, English, linguistics, and Spanish. For additional information contact the Extension Counseling office, 373-3905.

Classics (Clas)

College of Liberal Arts

Textbooks for most Clas courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

(See also Latin, Art History, Greek, and related courses in History, Humanities, Informal Courses, Religious Studies, and Women's Studies)

Gerald Erickson, Professor of Classical Studies
Jackson Hershbell, Professor of Classical Studies

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Thomas Kelly, Professor of History, Classical Studies
Jeremiah Reedy, Adjunct Professor of Classical Studies
George Rochefort, Adjunct Associate Professor of Classical Studies
Philip Sellew, Assistant Professor of Classical Studies

NOTE—Classics (Clas) courses require no knowledge of Latin or Greek.

You need not be majoring in Classical Civilization 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 Classics. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

Clas 1042 GREEK AND ROMAN MYTHOLOGY. 4 degree credits, \$148. (◆\$74)

The heroes, gods, and goddesses of ancient Greece and Rome. The stories of the myths and the stories behind the myths. (No prereq. May be applied toward the CLA second language requirement, Route II for Greek and Latin [see page 562])

Winter Qtr Sec 1 W—6:20-8:50, FolH 308, Rochefort

Clas 1045 BASIC PROGRAM IN TECHNICAL TERMINOLOGY AND WORD STUDY. 2 degree credits, \$3045, \$74.

Study of prefixes, suffixes, and high frequency roots from Greek and Latin through computer-assisted instruction; principles of word compounding; methods and techniques of word analysis. Computer-assisted instruction. Self-paced. (No prereq. Meets concurrently with 1048, 1141, 3046)

Fall Qtr Sec 1 T—6:20-8:50, FolH 303, Erickson

Clas 1048 TECHNICAL TERMS OF THE MEDICAL AND BIOLOGICAL SCIENCES. 3 degree credits, \$3048, \$111. (IS)

Study of roots and terms basic to the medical and biological sciences in English contexts. Computer-assisted instruction. Self-paced. (Prereq 1045 or 3045. Meets concurrently with 1045, 1141, 3046)

Fall Qtr Sec 1 T—6:20-8:50, FolH 303, Erickson

Class 1141 TECHNICAL TERMS FOR NURSING. 3 degree credits, \$1048, \$3048, \$111.

Study of Greek and Latin prefixes, suffixes, and roots basic to the vocabulary of nursing through computer-assisted instruction. Self-paced. (No prereq. Meets concurrently with 1045, 1048, 3046)

Fall Qtr Sec 1 T—6:20-8:50, FolH 303, Erickson

Clas 3006 GREAT FIGURES IN ANCIENT BIOGRAPHY. 4 degree credits, \$154. (◆\$77)

Important historical and legendary personages in classical literature; their accomplishments, factors that shaped their characters, criteria for "greatness," the social and political milieu in which they functioned, the hero myth and history; psychohistorical approach to biography; development of views toward the figures in later ages. For example, discussed are Alexander the Oracle Monger, Apuleius, the Gracchi, Sappho, Odysseus, and the Viking Hadding. (No prereq)

Spring Qtr Sec 1 M—6:20-8:50, FolH 305, Erickson

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Clas 3007 THE WORLD OF GREECE. 4 degree credits, \$5007, \$154. (◆\$77)

Greek civilization from the world of Homer to the age of Alexander. The Greek view of life as seen in art, history, literature, and philosophy. The golden age of Greece in the 5th century B.C.; expansion of the Greek spirit under Alexander. (No prereq. May be applied toward the CLA second language requirement, Route II, for Greek [see page 562]. Meets concurrently with 5007)

Fall Qtr Sec 1 **W**—6:20-8:50, FolH 305, Reedy

Clas 3008 THE WORLD OF ROME. 4 degree credits, \$5008, \$154. (◆\$77)

General survey of Roman civilization from its origins to the reign of Constantine. The Roman way of life as seen in art, history, literature, and philosophy. Special attention paid to the Etruscans and to the golden age of Rome under Augustus. (No prereq. May be applied toward the CLA second language requirement, Route II, for Latin [see page 562]. Meets concurrently with 5008)

Winter Qtr Sec 1 **Th**—6:20-8:50, FolH 305, Kelly

(See also IC 0604, Buried Cities of Ancient Rome; and IC 0929, Rome of the Caesars)

Clas 3046 ADVANCED ETYMOLOGY: VOCABULARY OF THE SCIENCES AND HUMANITIES. 3 degree credits, \$115.50.

Latin and Greek roots that have English derivatives; regularities of linguistic change (Grimm's law), principles of etymology, and lessons on specialized terminology in various fields. Computer-assisted instruction. Self-paced. (Prereq 1045 or 3045. Meets concurrently with 1045, 1048, 1141)

Fall Qtr Sec 1 **T**—6:20-8:50, FolH 303, Erickson

Clas 3072 THE NEW TESTAMENT. 4 degree credits, \$5072, \$154. (◆\$77)

First-century Israel under Roman rule. Jesus of Nazareth. Earliest Christian communities. Jewish Christianity. Mission to Gentiles. Paul the Apostle. Beginnings of New Testament. Study through the perspectives of archaeology, literary studies, psychology, history. Discussion of the relevance of the topics for today. (No prereq. Meets concurrently with 5072)

CEW **Winter Qtr** Sec 1 **F**—9 a.m.-11:30, MacP, Sellaw

Offered through Continuing Education for Women

Clas 3145 GREEK AND ROMAN MYTHOLOGY II: ANALYSIS AND TRADITION. 4 degree credits, \$5145, \$154. (◆\$77)

The methods of interpreting Graeco-Roman myth, from Homer to Freud, Jung, and Levi-Strauss; the artistic survival of classical myth in literature, painting, and music. (Prereq 1042 or #. May be applied toward the CLA second language requirement, Route II, for Greek and Latin [see page 562]. Meets concurrently with 5145)

Spring Qtr Sec 1 **Th**—6:20-8:50, FolH 305, Rochefort

Clas 5007 THE WORLD OF GREECE. 4 degree credits, \$3007, \$154.

See course description for 3007. (No prereq. Same as 3007 but requires additional work. May be applied toward the CLA second language requirement, Route II, for Greek [see page 562]. Meets concurrently with 3007)

Fall Qtr Sec 1 **W**—6:20-8:50, FolH 305, Reedy

Clas 5008 THE WORLD OF ROME. 4 degree credits, \$3008, \$154.

See course description for 3008. (No prereq. Same as 3008 but requires additional work. May be applied toward the CLA second language requirement, Route II, for Latin [see page 562]. Meets concurrently with 3008)

Winter Qtr Sec 1 **Th**—6:20-8:50, FolH 305, Kelly

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Clas 5072 THE NEW TESTAMENT. 4 degree credits, \$3072. \$154.

See description for 3072. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3072)

CEW

Winter Qtr Sec 1 F—9 a.m.-11:30, MacP, Sellev

Offered through Continuing Education for Women

Clas 5145 GREEK AND ROMAN MYTHOLOGY II: ANALYSIS AND TRADITION. 4 degree credits, \$3145, \$154. (IS)

Same classwork as 3145 but with special independent reading and research assignments in consultation with the instructor. (Prereq 1042 or #. May be applied toward the CLA second language requirement, Route II, for Greek and Latin [see page 562]. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3145)

Spring Qtr Sec 1 Th—6:20-8:50, FolH 305, Rochefort

Communication Disorders (CDis)

College of Liberal Arts

Textbooks for most CDis courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

Patricia A. Broen, Associate Professor of Communication Disorders

Robert H. Brookshire, Professor of Communication Disorders

Jane E. Carlstrom, Assistant Clinical Specialist in Communication Disorders

Shirley S. Doyle, Assistant Clinical Specialist in Communication Disorders

Samuel K. Haroldson, Associate Professor of Communication Disorders

Karlind T. Moller, Professor of Human and Oral Genetics and Communication Disorders

Joe E. Reichle, Assistant Professor of Communication Disorders

Clark D. Starr, Professor of Communication Disorders

Jerry L. Yanz, Assistant Professor of Communication Disorders

OCDis 5101 COMMUNICATION PROBLEMS OF CHILDREN. 3 degree credits, \$115.50.

Considerations of children with impaired communication due to delayed language development, hearing loss, articulation disorders, voice disorders, stuttering, cleft palate (oral-facial anomalies) and neuromuscular disorders. Emphasis on understanding and management of communicatively impaired children in regular classrooms. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 M—4:30-6:30, FolH 303, Doyle

OCDis 5102 COMMUNICATION PROBLEMS OF ADULTS. 3 degree credits, \$115.50.

Specific problems of hearing, speech, language and voice in adults. For persons interested in human communication. Information basic to the communicatively impaired adult. Implications for familial, social, academic and vocational adjustments to living. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 W—3:15-5, FolH 303, Haroldson

OCDis 5506 APHASIA. 4 degree credits, \$154.

Etiology, diagnosis, evaluation and treatment of brain-damaged, communicatively impaired adults. Clinical case materials are presented and analyzed. Opportunities for observation of evaluation and treatment of adult aphasic individuals are offered.

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

(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 303, Brookshire

○CDis 5507 CLEFT PALATE, ORAL-FACIAL ANOMALIES AND SPEECH. 4 degree credits, \$154.

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. (No prereq. 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 303, Starr, Moller

○CDis 5705 OBJECTIVE MEASURES OF AUDITORY FUNCTION. 3 degree credits, \$115.50.

Advanced techniques for clinical physiological evaluation of the auditory system. Major emphasis is on acoustic immittance and auditory evoked potentials, with some discussion of other topics such as electronystagmography, galvanic skin response, and electrocardiac response. Laboratory participation required. (Prereq 5701 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **T—Lect**, 4:30-6:30, ShevH 119, Yanz

Th—Lab, 4:30-6:30, ShevH 119, Yanz

○CDis 5900 TOPICS IN COMMUNICATION DISORDERS: AUGMENTATIVE COMMUNICATION SYSTEMS. 4 degree credits, \$154.

The course will acquaint students with augmentative communication systems that include signing and communication boards. The course will focus on those communicative, perceptual motor and cognitive considerations necessary in the selections and establishment of a communication system. Normal communicative behavior will be reviewed with emphasis upon the relationship between communicative content and communicative modality. (Prereq 5305 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **Th**—4:30-7:30, FolH 303, Reichle

○CDis 5900 TOPICS IN COMMUNICATION DISORDERS: LANGUAGE ASSESSMENT AND INTERVENTION—LATER STAGES. 3 degree credits, \$115.50.

Analysis of language disorders in school-age children with special emphasis on assessment and intervention. (Prereq 5305 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 2 **T**—3:15-6, FolH 303, Broen

★○CDis 5900 TOPICS IN COMMUNICATION DISORDERS: CONVERSATIONAL SIGNED ENGLISH. 2 degree credits, \$77.

This course will involve activities designed to teach students a repertoire of 300 signed words. Additionally, students will learn standard morphological, syntactic, and prosodic markers used in signed English. A second component of the course will involve the presentation of lecture material defining manual communication systems, describing characteristics of a variety of formal sign systems, and describing the use of signing as an alternative or augmentative communication system. (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 3 **W**—4:30-7:30, FolH 303, Carlstrom

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Comparative Literature (CLit)

College of Liberal Arts

Textbooks for most CLit courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

(See also English, General College, and individual foreign language departments for other literature courses)

Wladyslaw Godzich, Professor of Comparative Literature

Ronald W. Sousa, Professor of Comparative Literature

Joint Day/Extension Classes

You may register through Extension for most Day School classes scheduled before 4 p.m. in Comparative Literature. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before registration for that quarter begins.

CLit 5331 THE EUROPEAN NOVEL, 1750-1850. 4 degree credits, \$154. (♦\$77)

Development of the novel as an artistic genre, social and intellectual-historical factors. Authors and works studied will include: Sterne (*Tristram Shandy*), Laclos (*Liaisons Dangereuses*), Rousseau (*Nouvelle Héloïse*), Goethe (*Werther*), Hoffmann (*Elixiere*), Austin (*Pride and Prejudice*), Scott (*Quentin Durward*), Balzac (*Goriot*), Stendahl (*Rouge et Noir*), Hugo (*Les Miserables*), Dickens (*Great Expectations*). (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6:20-8:50, FolH 205, Sousa

CLit 5910 NOVELS AND NOVEL MAKING. 4 degree credits, \$154. (♦\$77)

Deals with some of the techniques involved in the composition of the traditional novel by using several texts to show the differences in novel composition. Balzac's *Old Goriot*, Turgenev's *Fathers and Sons*, and Jacqueline Susann's *Dolores* are used to show how novels are crafted and why certain novels are better than others, structurally if not substantively. The instructor is a practicing writer. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—6:20-8:50, FolH 205

CLit 5910 ITALIAN CINEMA SINCE 1945. 4 degree credits, \$154 plus \$20 special fee.

Total \$174 (♦\$77 plus \$20 special fee. Total \$97)

Significant moments of Italian cinema to be analyzed on the basis of the following films: *Umberto D* (1952); *Rocco and His Brothers* (1960); *Before the Revolution* (1962); *Red Desert* (1964); *Investigation of a Citizen Above Suspicion* (1970); *The Arabian Nights* (1974); *Bread and Chocolate* (1978); *The Night of the Shooting Stars* (1982). Particularly to be discussed in the course are the tradition of Neorealism in Italian cinema up to today; the "break" of the 1960s (the birth of the *cinema di poesia* and its tradition); genre: "spaghetti Western," political films, Italian comedy; the emergence of new problematics. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 2 **W**—6:20-8:50, FolH 50

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Composition and Communication (Comp)

College of Liberal Arts

Textbooks for most Comp courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

(See also General College; Speech; Study Skills; Rhetoric; English; Informal Courses; and Professional Improvement Courses and Seminars)

Ray Anschel, *Lecturer in Composition*
 Pat Darling, *Lecturer in Composition*
 Brian Donovan, *Lecturer in Composition*
 David Dresbach, *Lecturer in Composition*
 Moira Erickson, *Lecturer in Composition*
 Linda Faust, *Lecturer in Composition*
 Melba Fauteux, *Lecturer in Composition*
 Edwin Felien, *Lecturer in Composition*
 Gayle Gaskill, *Lecturer in Composition*
 Keith Gildersleeve, *Lecturer in Composition*
 Parker Johnson, *Lecturer in Composition*
 Michael Keenan, *Lecturer in Composition*
 Miles Krogfus, *Lecturer in Composition*
 Patrick Lally, *Lecturer in Composition*
 Ruth Lysne, *Lecturer in Composition*
 Constance Mierendorf, *Lecturer in Composition*
 Willard Moore, *Lecturer in Composition*
 Justin O'Connell, *Lecturer in Composition*
 Joan Pinkney, *Lecturer in Composition*
 Don Ross, *Professor of Composition and English*

Composition Requirements for Degree Programs. Starting in September 1982, the College of Liberal Arts and most other colleges of the University require 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 Comp 002C Grammar and Usage Review, or courses from the General College writing laboratory if they feel their background in structure or grammar is insufficient, or American Studies 1101, 1102, 1103, American Life, if they feel their reading background has been neglected. Rhetoric 1147, Efficient Reading, and PO 1001, Personal Orientation, How to Study, 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 Counseling Office, 314 Nolte Center, 373-3905, 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 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 (30xx) course to complete their requirement.

International students. Students whose native language is not English must take the TOEFEL test or otherwise be certified by the English as a Second Language (ESL) office in 140 Klaeber Court (telephone 373-7855) before taking composition courses. For additional information on testing, see English as a Second Language, page 198. Qualified students are advised to begin freshman composition with section 15 of Comp 1011 (see below).

Read about abbreviations, symbols, and maps on page 60.
 Courses and sections in red have limits on enrollment. See page 20.

Exemptions. Students with exceptionally high skills in English may earn exemption from the Writing Practice requirement by earning a very high score in the English placement test. Students interested in this alternative should contact the Counseling Office, 314 Nolte Center, 373-3905.

For information about a free course on how to use University libraries, students should check page 498 in this Bulletin.

Comp 0002C GRAMMAR AND USAGE REVIEW. 4 certificate credits, \$148. (IS)

An intensive step-by-step review of grammar (parts of speech, inflections, syntax), punctuation, and spelling for those who want a "refresher" before going into other composition courses or who feel the need of a basic course in the fundamentals of English usage; designed to develop the ability to compose correct and effective sentences. (No prereq)

Fall Qtr Sec 1 **M**—6:20-8:50, LindH 217, O'Connell
Sec 2 **T**—6:20-8:50, LindH 215, Fauteux
Winter Qtr Sec 3 **T**—6:20-8:50, LindH 303, Anschel
Spring Qtr Sec 4 **W**—6:20-8:50, LindH 303, O'Connell

Comp 0003C REVIEW OF BUSINESS ENGLISH. 3 certificate credits, \$111.

For those who have been out of school for a while or have had poor preparation for business English while in school. Effective sentence structure, paragraphing, punctuation and spelling. Brief introduction to letter form and organization. Emphasis on brevity, accuracy, meaning and vividness. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, LindH 217

Comp 0004C BUSINESS CORRESPONDENCE. 3 certificate credits, \$111.

A practical class for those who want to write better letters and short reports. Multiple-option assignments permit each student to take a special course tailored to that student's needs in any field—administration, sales, credit, interior design, etc. Students learn how to write on any reading level as is now required by many states. Emphasis is on clear, brief, action-getting letters and reports. (No prereq)

Winter Qtr Sec 1 **W**—6:20-8:50, MinMet 120

Comp 0006C BASIC TECHNICAL WRITING. 3 certificate credits, \$111.

Review of basic English and introduction to technical writing. Designed for people in the technical industries. Includes sentence design, spelling and punctuation. Covers basic techniques of definition, description, process, procedure, and analysis writing. Organization and correlation into text of tables, diagrams, illustrations. Emphasis on accuracy, brevity, simplicity, and layout. Prepares students to write simple reports, specifications, procedures, material for manuals, supervisory materials, and basic letters of a technical nature. (No prereq)

Fall Qtr Sec 1 **Th**—6:20-8:50, LindH 340
Spring Qtr Sec 2 **T**—6:20-8:50, LindH 215

★Comp 1011 WRITING PRACTICE I. 5 degree credits, \$185. (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

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

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 28)

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

Fall Qtr	Sec 1	M—6:20-9:10, LindH 303, Darling
	Sec 2	M—6:20-9:10, LindH 325, Felien
	Sec 3	M—6:20-9:10, LindH 340
	Sec 4	T—6:20-9:10, LindH 303, Krogfus
	Sec 5	T—6:20-9:10, LindH 325, Lally
	Sec 6	T—6:20-9:10, LindH 217
	Sec 7	W—6:20-9:10, LindH 203, Pinkney
	Sec 8	W—6:20-9:10, LindH 305
	Sec 9	Th—6:20-9:10, LindH 315, Lysne
	Sec 10	Th—6:20-9:10, LindH 325
Winter Qtr	Sec 11	M—6:20-9:10, LindH 303, Donovan
	Sec 12	M—6:20-9:10, LindH 315, Lally
	Sec 13	T—6:20-9:10, LindH 302, Lysne
	Sec 14	T—6:20-9:10, LindH 325, Faust
	Sec 15	W—6:20-9:10, LindH 203
	Sec 15	open to ESL students only
	Sec 16	W—6:20-9:10, LindH 217, Krogfus
	Sec 17	W—6:20-9:10, LindH 303, Fauteux
	Sec 18	Th—6:20-9:10, LindH 320, Gaskill
	Sec 19	Th—6:20-9:10, LindH 340
Spring Qtr	Sec 20	M—6:20-9:10, LindH 315, Mierendorf
	Sec 21	M—6:20-9:10, LindH 320, Donovan
	Sec 22	T—6:20-9:10, LindH 303, Anshel
	Sec 23	W—6:20-9:10, LindH 215, Erickson
	Sec 24	W—6:20-9:10, LindH 217, Gaskill
	Sec 25	Th—6:20-9:10, LindH 320, Dresbach
	Sec 26	Th—6:20-9:10, LindH 303, Moore

ROBBINSDALE/ARMSTRONG SENIOR HIGH SCHOOL, PLYMOUTH

Winter Qtr Sec 27 W—6:20-9:10, room C-255

ALEXANDER RAMSEY HIGH SCHOOL, ROSEVILLE

Spring Qtr Sec 28 M—6:20-9:10, room 252, Faust

MINNETONKA HIGH SCHOOL

Fall Qtr Sec 29 T—6:20-9:10, room 119, Anshel

IRONDALE HIGH SCHOOL, NEW BRIGHTON

Spring Qtr Sec 30 W—6:20-9:10, room 311, Lally

RICHFIELD HIGH SCHOOL

Fall Qtr Sec 31 M—6:20-9:10, room 141, Moore

Spring Qtr Sec 32 T—6:20-9:10, room 141, Lysne

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**Comp 1013 WRITING PRACTICE II.** 4 degree credits, \$148.

Intensive work on individual writing problems. Highly individualized workshops and conferences. **Must be taken S-N.** Students who need this course must contact the Composition office (373-2541) before the first day of classes. (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 degree credits, \$148. (IS)

Principles of mature style and effective organization, with special emphasis on revising and editing, and on sustaining a distinctive authorial voice which is appropriate to various audiences and writing situations. Recommended for students who have had previous writing experience. It is not an upper division course. (Prereq completion of the Writing Practice requirement, or Comp 1001 or Comm 1001; sophomore standing is recommended. Limited to 25)

Fall Qtr Sec 1 **M**—6:20-8:50, LindH 320, Felien

Sec 2 **T**—6:20-8:50, LindH 320, Gaskill

Sec 3 **W**—6:20-8:50, LindH 340

Sec 4 **Th**—6:20-8:50, LindH 320, Erickson

Winter Qtr Sec 5 **M**—6:20-8:50, LindH 325

Sec 6 **M**—6:20-8:50, LindH 320, Erickson

Sec 7 **M**—6:20-8:50, Richfield HS 142, Darling

Sec 8 **W**—6:20-8:50, LindH 340, Moore

Sec 9 **Th**—6:20-8:50, LindH 325

Spring Qtr Sec 10 **M**—6:20-8:50, Robbinsdale/Armstrong
HS C-259, Plymouth

Sec 11 **T**—6:20-8:50, LindH 340, Fauteux

Sec 12 **W**—6:20-8:50, LindH 305, Darling

Sec 13 **Th**—6:20-8:50, LindH 340, Pinkney

Comp 3011-3085 UPPER DIVISION WRITING COURSES.

Completion of one of these courses (4 cr) 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. The Composition office and the Extension Counseling Office have a list of which courses are required or recommended for each degree program.

★**Comp 3011 WRITING ABOUT LITERATURE.** 4 degree credits, \$3030, \$154. (IS)

Developing a critical argument about literary texts (novels, poems, plays) with attention paid to the use of "secondary sources." Assignments will include experiments with different modes of explication and criticism. (Prereq the Writing Practice requirement or equivalent. Limited to 20)

Fall Qtr Sec 1 **W**—6:20-8:50, LindH 325, Donovan

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

- ★**Comp 3012 WRITING ABOUT NONFICTION TEXTS.** 4 degree credits, \$154 (IS)
 Effective analysis and argument including proper ways to present and paraphrase texts from such fields as philosophy, history, social work, and anthropology. May include a long (5-10 page) research paper. (Prereq the Writing Practice requirement or equivalent. Limited to 20)
Spring Qtr Sec 1 T—6:20-8:50, LindH 325, Felien
- ★**Comp 3013 WRITING FOR ARTS OTHER THAN LITERATURE.** 4 degree credits, \$154. (IS)
 Description of painting, sculpture, music, etc., as the basis for analysis and generalization. Assignments will include some reviews and criticism, and ways to use others' commentaries on the arts. (Prereq the Writing Practice requirement or equivalent. Limited to 20)
Winter Qtr Sec 1 Th—6:20-8:50, LindH 315, Pinkney
- ★**Comp 3014 WRITING FOR THE QUANTITATIVE SOCIAL SCIENCES.** 4 degree credits, \$154. (IS)
 Developing strategies for expressing quantitative and statistical information in clear prose, and exercises in effective ways to describe individual case histories. Major papers will include the analysis of complex situations and institutions. (Prereq the Writing Practice requirement or equivalent. Limited to 20)
Spring Qtr Sec 1 Th—6:20-8:50, LindH 315, Gildersleeve
- ★**Comp 3027 ADVANCED EXPOSITORY WRITING.** 4 degree credits, \$154. (IS)
 General introduction to narration, description, proof, and persuasion; proper framing of arguments and analysis; use and evaluation of sources for longer papers. Required for juniors in the "regular" track, School of Management. (Prereq the Writing Practice requirement or equivalent. Limited to 20)
Fall Qtr Sec 1 T—6:20-8:50, LindH 340, Dresbach
Winter Qtr Sec 2 M—6:20-8:50, LindH 340, Keenan
 Sec 3 T—6:20-8:50, LindH 340, Dresbach
Spring Qtr Sec 4 W—6:20-8:50, LindH 340, Krogfus
- ★**Comp 3031 TECHNICAL WRITING FOR ENGINEERING.** 4 degree credits, \$3085, \$154. (IS)
 Focus on the form and style of technical, engineering writing in reports, documentation, and correspondence. Exercises and frequent practical examples, tied as much as possible to students' major fields. All students graduating from the Institute of Technology fall quarter 1984 and thereafter must have a course in advanced composition as recommended by their major. (Prereq the Writing Practice requirement or equivalent. Limited to 20)
Fall Qtr Sec 1 M—6:20-8:50, LindH 315, Gildersleeve
Winter Qtr Sec 2 T—6:20-8:50, LindH 320, Johnson
 Sec 3 W—6:20-8:50, LindH 325, Gildersleeve
Spring Qtr Sec 4 T—6:20-8:50, LindH 315
- ★**Comp 3032 PRE-PROFESSIONAL WRITING FOR BUSINESS.** 4 degree credits, \$154. (IS)
 Focus on the rhetoric, form, and style of business writing in reports, case studies, and correspondence. Exercises and frequent practical examples, tied as much as possible
 (continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

to students' major fields. This course fulfills senior business-writing requirement for the School of Management. (Prereq the Writing Practice requirement or equivalent. Limited to 20)

Fall Qtr Sec 1 **W**—6:20-8:50, LindH 315, Faust
Sec 2 **Th**—6:20-8:50, LindH 302, Mierendorf
Winter Qtr Sec 3 **M**—6:20-8:50, LindH 302

Winter Qtr Sec 4 **W**—Lect, 6:20-8:50, LindH 302, Mierendorf
M—Lab, 6-9, LindH 306, Mierendorf

Special section involving the use of word processors for most assignments. Students must be able to attend the lab in addition to the class. Ability to type helps, but is not essential.

Spring Qtr Sec 5 **M**—6:20-8:50, LindH 229

(See related courses in Informal Courses; General College; and Professional Improvement Courses and Seminars)

Comp 3050 TOPICS IN ADVANCED COMPOSITION: EDITORIAL PRACTICE. 4 degree credits, (maximum 12 cr, no topic can be repeated), \$154.

Introduces fundamental elements of editorial work, especially the evaluation of manuscripts; attention is paid to "in-house" publications, such as newsletters. Survey of copy editing (making manuscripts clear and concise), substantive editing (working with content), and layout and design. Students hear guest lectures, participate in group editing projects, and present a report on some aspect of editing. (No prereq)

Fall Qtr Sec 1 **Th**—6:20-8:50, LindH 303, O'Connell
Spring Qtr Sec 2 **M**—6:20-8:50, LindH 303

Comp 3080 SPECIAL PROJECTS IN ADVANCED COMPOSITION. 2 degree credits each quarter (6 credits maximum), \$77 plus \$40 special fee. Total \$117 each quarter.

Weekly individual writing conferences scheduled at student's and instructor's convenience. Interested students should contact Donald Ross through the Composition Office (209 Lind Hall, 373-2541), preferably with a brief written outline of the project. (Prereq the Writing Practice requirement or equivalent)

Fall Qtr Sec 1 **Arr.**
Winter Qtr Sec 2 **Arr.**
Spring Qtr Sec 3 **Arr.**

Computer Science (CSci)

Institute of Technology

Textbooks for most CSci courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

Your attention is called to the Undergraduate Development Certificate in Computer Science, 45 and 90 credits, page 603; Management Information Systems, page 309; Professional Improvement Courses and Seminars, and Computer Science degree, below.

*Parviz Afshari, Assistant Professor of Computer Science
David Du, Assistant Professor of Computer Science
Krzysztof Frankowski, Associate Professor of Computer Science
Oscar Ibarra, Professor of Computer Science*

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Kurt Maly, Associate Professor of Computer Science
 William D. Munro, Professor of Computer Science
 Sartaj Sahni, Professor of Computer Science
 Marvin L. Stein, Professor of Computer Science

A BACHELOR OF ARTS (B.A.) WITH A MAJOR IN COMPUTER SCIENCE OFFERED THROUGH THE COLLEGE OF LIBERAL ARTS, AND THE MAJORITY OF A BACHELOR OF COMPUTER SCIENCE (B. Comp. Sci.) OFFERED THROUGH THE INSTITUTE OF TECHNOLOGY, CAN BE COMPLETED IN THE EVENING.

Students may earn the majority of credits required for a B.S. degree in Computer Science offered in the INSTITUTE OF TECHNOLOGY.

The following is a partial list of the course requirements common to both the B.S. (Institute of Technology) and the B.A. (College of Liberal Arts).

Required Preparatory Courses

Math 1211-1221-1231 or Math 1311-1321-1331, and Math 3211, 3142 or 3221; Stat 3091 or 5121 for students intending to take additional work in statistics

Major Requirements

CSci 3001, 3104, 3105, 3106, 3107, 3400, 5102, 5106, 5121, 5201, 5301, 5400

Students are referred to the Institute of Technology Bulletin or the College of Liberal Arts Bulletin for specifics on additional requirements.

Permission of the department is required for admission to the major. For additional information, contact Extension Counseling, 373-3905.

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 1311 or 1211 is 4 years of high school mathematics including solid geometry and trigonometry. Any student who meets this requirement is eligible to register for Math 1311 or 1211. However, if it has been two years or more since last taking a mathematics course, the student is strongly advised to register for Math 1201 or possibly Math 0009. A student who has completed Math 0009 or its equivalent (higher algebra) in high school or college (not a trade school) within the last 2 years may register for Math 1201. Math 0009 and Math 1201 take the place of the junior and senior mathematics courses in high school.

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.

See page 24 for information regarding reopenings that may occur prior to the start of the term.

CSci 3001 PERSPECTIVES ON COMPUTERS AND SOCIETY. 4 degree credits, \$NSci 3201, \$186.

The impact of computers on society. Partnership or confrontation. History of development. Potential for use. Computer utility. Privacy in a computer society. The future of computers. The ultimate machine. Computers in business, industry, art, music, the home. (Prereq sophomore or #)

Spring Qtr Sec 1 **Th**—6:10-8:40 plus informal lab, Arch 50

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★CSci 3101 A FORTRAN INTRODUCTION TO COMPUTER PROGRAMMING. 4
 degree credits, \$1100-1101, \$186 plus \$6 special fee. Total \$192.

FORTRAN computer language; extensions; applications; programming techniques. Brings students to advanced level competence in FORTRAN programming. Integral nonscheduled laboratory. (Prereq Math 1111 or 1201 or equivalent or #. Limited to 50)

Fall Qtr	Sec 1	Lect W —6:10-8:40, SmithH 100	
		Lab W —6:10-8:40, MechE 202	
	Sec 2	Lect W —6:10-8:40, SmithH 100	
		Lab W —6:10-8:40, CivMinE 212	
	Sec 3	Lect W —6:10-8:40, SmithH 100	
		Lab W —6:10-8:40, Phys 210	
	Sec 4	Lect W —6:10-8:40, SmithH 100	
		Lab W —6:10-8:40, Phys 170	
	Sec 5	Lect W —6:10-8:40, SmithH 100	
		Lab W —6:10-8:40, Arch 50	
	Sec 6	Lect W —6:10-8:40, SmithH 100	
		Lab W —6:10-8:40, Arch 55	
Winter Qtr	Sec 7	Lect W —6:10-8:40, Phys 150	
		Lab W —7:30-8:40, Phys 131	
	Sec 8	Lect W —6:10-8:40, Phys 150	
		Lab W —6:10-8:40, Phys 210	
	Sec 9	Lect W —6:10-8:40, Phys 150	
		Lab W —7:30-8:40, Phys 170	
	Sec 10	Lect W —6:10-8:40, Phys 150	
		Lab W —7:30-8:40, MinMet 116	
	Sec 11	Lect W —6:10-8:40, Phys 150	
		Lab W —7:30-8:40, CivMinE 212	
	Sec 12	Lect W —6:10-8:40, Phys 150	
		Lab W —7:30-8:40, Phys 133	
	Sec 13	Lect W —6:10-8:40, MechE 108	
		Lab W —7:30-8:40, MechE 108	
	Spring Qtr	Sec 14	Lect W —6:10-8:40, Phys 150
			Lab W —7:30-8:40, Phys 131
		Sec 15	Lect W —6:10-8:40, Phys 150
			Lab W —7:30-8:40, Phys 133
Sec 16		Lect W —6:10-8:40, Phys 150	
		Lab W —7:30-8:40, Phys 210	
	Sec 17	Lect W —6:10-8:40, Phys 150	
		Lab W —7:30-8:40, Phys 170	
	Sec 18	Lect W —6:10-8:40, Phys 150	
		Lab W —7:30-8:40, MinMet 116	
	Sec 19	Lect W —6:10-8:40, Phys 150	
		Lab W —7:30-8:40, CivMinE 212	

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★CSci 3104 INTRODUCTION TO PROGRAMMING AND PROBLEM SOLVING. 5 degree credits, \$232.50 plus \$6 special fee. Total \$238.50.

Problem solving techniques, stepwise, refinement, systematic loop design, evaluation criteria, programming style, documentation, design of test data. Applications in Pascal. Scheduled lab sections. **Required introductory course for CSci and Math/CSci majors.** (Prereq Math 1211 or equivalent or # and CSci or Math/CSci major or Δ. Limited to 50)

- Fall Qtr**
- Sec 1 **Lect M**—6:10-9, SmithH 100
Lab M—7:45-9, CivMinE 212
- Sec 2 **Lect M**—6:10-9, SmithH 100
Lab M—7:45-9, Phys 131
- Sec 3 **Lect M**—6:10-9, SmithH 100
Lab M—7:45-9, Phys 210
- Sec 4 **Lect M**—6:10-9, SmithH 100
Lab M—7:45-9, Arch 5
- Sec 5 **Lect M**—6:10-9, SmithH 100
Lab M—7:45-9, Arch 35
- Sec 6 **Lect M**—6:10-9, SmithH 100
Lab M—7:45-9, Arch 50
- Sec 7 **Lect M**—6:10-9, MechE 102
Lab M—7:45-9, MechE 102
- Winter Qtr**
- Sec 8 **Lect M**—6:10-9, Phys 150
Lab M—7:45-9, Phys 133
- Sec 9 **Lect M**—6:10-9, Phys 150
Lab M—7:45-9, Phys 170
- Sec 10 **Lect M**—6:10-9, Phys 150
Lab M—7:45-9, PillsH 110
- Sec 11 **Lect M**—6:10-9, Phys 150
Lab M—7:45-9, Phys 210
- Sec 12 **Lect M**—6:10-9, Phys 150
Lab M—7:45-9, Arch 5
- Sec 13 **Lect M**—6:10-9, Phys 150
Lab M—7:45-9, Arch 50
- Spring Qtr**
- Sec 14 **Lect M**—6:10-9, Phys 150
Lab M—7:45-9, Arch 5
- Sec 15 **Lect M**—6:10-9, Phys 150
Lab M—7:45-9, Arch 50
- Sec 16 **Lect M**—6:10-9, Phys 150
Lab M—7:45-9, Phys 170
- Sec 17 **Lect M**—6:10-9, Phys 150
Lab M—7:45-9, Phys 131
- Sec 18 **Lect M**—6:10-9, Phys 150
Lab M—7:45-9, Phys 210
- Sec 19 **Lect M**—6:10-9, Phys 150
Lab M—7:45-9, Phys 133

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★CSci 3105 **FUNDAMENTALS OF ALGORITHMS AND LANGUAGES I.** 4 degree credits, \$186 plus \$6 special fee. Total \$192.

Informal and formal approaches to algorithms, their properties and specification through an algorithmic language; computability, complexity, O-notation. Design of algorithms, solution techniques, problem decomposition, design documentation. Scope of variables and block structure. Analysis of numerical errors. Program testing. Examples from sorting and searching are required, to illustrate solution techniques. Informal laboratory. (Prereq 3101 or 3102 or 3104 or #. Limited to 150)

Winter Qtr Sec 1 **T**—6:10-8:40, MechE 108, 212

★CSci 3106 **FUNDAMENTALS OF ALGORITHMS AND LANGUAGES II.** 4 degree credits, \$186 plus \$6 special fee. Total \$192.

Non-numeric application areas of computer science; recursion as an algorithm development technique and its implementation in a programming language; introduction to artificial intelligence. A second language (LISP or SNOBOL). Data structures, use of recursive data structures, pointers and records in Pascal, data abstractions and data invariants. Syntax and Semantics, BNF, abstract interpreters. Informal laboratory. (Prereq 3104 and 3105 or #. Limited to 125)

Spring Qtr Sec 1 **T**—6:10-8:40, MechE 108, 212

★CSci 3107 **INTRODUCTION TO THE STRUCTURE AND PROGRAMMING OF COMPUTER SYSTEMS.** 4 degree credits, \$5101. \$186 plus \$6 special fee. Total \$192.

Organization and logical structure of computer systems. Representation of programs and data. Topics: number systems, primitive computer systems, programming in machine language. Extensions to more sophisticated systems, assembly language, sequencing, decision making, arithmetic, logical operations, character manipulation, iteration, sub-routines, data description. Informal laboratory. (Prereq 3104 or 3101 or #. Meets concurrently with 5101. Limited to a combined total of 150)

Fall Qtr Sec 1 **Th**—6:10-8:40, MechE 108, 212, Stein

★CSci 3400 **DISCRETE STRUCTURES OF COMPUTER SCIENCE.** 4 degree credits, \$186 plus \$6 special fee. Total \$192.

Sets and multisets. Proof techniques. Propositional calculus. Combinatorics. Algorithms. Computability and unsolvability. Graphics. Trees. (Prereq Math 1211, CSci 3105 or Math 1331 or equivalent or #. Limited to 125)

Spring Qtr Sec 1 **Th**—6:10-8:40, MechE 108, 212, Sahni

★CSci 5101 **STRUCTURE AND PROGRAMMING OF SOFTWARE SYSTEMS I.** 4 degree credits, \$3107. \$186 plus \$6 special fee. Total \$192.

See course description for CSci 3107. Informal laboratory. (Prereq 1101 or 3104 or 3101 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3107. Limited to a combined total of 150)

Fall Qtr Sec 1 **Th**—6:10-8:40, MechE 108, 212, Stein

★CSci 5102 **STRUCTURE AND PROGRAMMING OF SOFTWARE SYSTEMS II.** 4 degree credits, \$186 plus \$6 special fee. Total \$192.

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 #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 125)

Winter Qtr Sec 1 **Th**—6:10-8:40, MechE 108, 212, Stein

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

CSci 5106 STRUCTURE OF HIGHER LEVEL LANGUAGES. 4 degree credits, \$186 plus \$6 special fee. Total \$192.

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 instantiations in a selected group of languages. Program description at compile time and execution time. (Prereq 5102 and 5121 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6:10-8:10, AmundH 240

★CSci 5121 INTRODUCTION TO DATA STRUCTURES. 4 degree credits, \$186 plus \$6 special fee. Total \$192.

Basic concepts of data and its representation. Sequential and linked representations. Arrays, stacks and queues. Chains, circular lists and doubly linked lists. Dynamic storage management. Garbage collection and storage compaction. Generalized lists. Strings. Binary trees and trees. Tree traversal. Graphs. Activity networks. (Prereq 3106 and 3400 or #. Open for graduate credit only to nonmajors. Limited to 125)

Fall Qtr Sec 1 **T**—6:10-8:40, Arch 5, Sahn

★CSci 5122 ADVANCED DATA STRUCTURES. 4 degree credits, \$186 plus \$6 special fee. Total \$192.

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 #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 160)

Winter Qtr Sec 1 **T**—6:10-8:40, Arch 5, Sahn

★CSci 5201 COMPUTER ARCHITECTURE. 4 degree credits, \$186 plus \$6 special fee. Total \$192.

Elementary computer architecture, gates and digital logic, register transfers and micro-operations, processor studies of existing systems. (Prereq 3400, 3107 or 5101 or #. Open for graduate credit only to nonmajors. Limited to 125)

Spring Qtr Sec 1 **Th**—6:10-8:40, Arch 35, Stein

★CSci 5301 NUMERICAL ANALYSIS. 4 degree credits, \$186 plus \$6 special fee. Total \$192.

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 3142 or #; a knowledge of a higher level language is assumed. Qualified students may register for graduate credit at the University of Minnesota. Limited to 125)

Fall Qtr Sec 1 **M**—6:10-8:40, AmundH 240, Frankowski

★CSci 5302 NUMERICAL ANALYSIS. 4 degree credits, \$186 plus \$6 special fee. Total \$192.

Norms, condition numbers and error analysis. Convergence rates for iterative methods. Numerical approximation methods. Least Squares. Fast Fourier transform. Spline interpolation. Gaussian quadrature. Computation of eigenvalues and eigenvectors. Stability and error analysis of methods for ordinary differential equations. Informal lab. (Prereq 5301 or #. Limited to 125)

Winter Qtr Sec 1 **M**—6:10-8:40, Arch 35, Frankowski

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

CSci 5400 INTRODUCTION TO AUTOMATA THEORY. 4 degree credits, \$186.

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 3105 and 3400 or #. Open for graduate credit only to nonmajors)

Fall Qtr Sec 1 **T**—6:10-8:40, AmundH 240, Ibarra

CSci 5502 INTRODUCTION TO OPERATING SYSTEMS. 4 degree credits, \$186.

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. Informal laboratory. (Prereq CLA-CSci major or IT-CSci major upper division or grad, 5102 and 5121 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **Th**—6:20-8:40, Arch 5, Afshari

Continuing Education for Women

(See credit courses list on page 439; See noncredit courses beginning page 441.)

Counseling, Chemical Dependency

(See Family Social Science; and Industrial Relations courses)

Curriculum and Instructional Systems (CISy)

College of Education

(Department of Curriculum and Instruction)

Textbooks for most CISy courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

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.

See page 24 for information regarding reopenings that may occur prior to the start of the term.

Andrew Ahlgren, Professor
Eugene Anderson, Associate Professor
Carol A. Carrier, Associate Professor
Richard D. Kimpston, Associate Professor
James A. Mackey, Professor
James Stochl, Professor
Robert D. Tennyson, Professor
Stanley R. Trollip, Assistant Professor
Reynold Willie, Associate Professor

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★OCISy 5000 EDUCATIONAL TECHNOLOGY: INSTRUCTIONAL SYSTEMS. 1 degree credit, §SeEd 5000 or 5102, \$47.25.

Introduction to use of technology in instruction; self-instructional, computer-managed module. **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 6 Extension students)

Winter Qtr Sec 1 M—4:15-6, EdHAn 64, Carrier

★OCISy 5003 EDUCATIONAL TECHNOLOGY: COMPUTERS IN THE CLASSROOM. 1 degree credit, §SeEd 5003 or 5102, \$47.25.

Introduction to use of computer technology in instruction; self-instructional, computer-managed module. **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 6 Extension students)

Fall Qtr Sec 1 W—4:15-6, PeikH 355

Winter Qtr Sec 2 T—4:15-6, PeikH 355

Spring Qtr Sec 3 T—4:15-6, PeikH 355

★OCISy 5004 EDUCATIONAL TECHNOLOGY: CLASSROOM VIDEO. 1 degree credit, §SeEd 5004 or 5102, \$47.25.

Introduction to use of video technology in instruction; self-instructional, computer-managed module. **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 6 Extension students)

Winter Qtr Sec 1 T—4:15-6, EdHAn 64

Spring Qtr Sec 2 M—4:15-6, EdHAn 64

★OCISy 5006 EDUCATIONAL TECHNOLOGY: INSTRUCTIONAL COMPUTER PROGRAMMING. 1 degree credit, \$47.25.

Introduction to designing computer-based instructional programs using software languages most used in learning environments (BASIC and PILOT). Students need not have a mathematics or science background. **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 6 Extension students)

Fall Qtr Sec 1 Th—4:15-6, PeikH 355

Winter Qtr Sec 2 W—4:15-6, PeikH 355

Spring Qtr Sec 3 W—4:15-6, PeikH 355

★OCISy 5201 SYSTEMS APPROACH TO DESIGN OF INSTRUCTION. 3 degree credits, §SeEd 5201, \$141.75

Instructional materials design in accordance with systems principles, including design of a specific unit of courseware. **Must be taken A-N.** (Prereq 5000 or SeEd 5000 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HSU 5013, Sec 1. A joint Day/Extension class limited to 6 Extension students)

Fall Qtr Sec 1 T—4:15-6, EdHAn 64, Carrier

★OCISy 5205 APPLICATIONS OF COMPUTERS IN EDUCATION. 3 degree credits, §SeEd 5205, \$141.75.

Computer uses in education and training; instructional applications: simulation, tutorial, counseling, testing, instructional management, modeling and information
(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

retrieval (including data base inquiry). Computer-managed course includes criteria for selection, evaluation, and examination of on-line examples. **Must be taken A-N.** (Prereq SeEd 5003 or CISy 5003. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Winter Qtr Sec 1 M—4:15-7, PeikH 355, Trollip

- ★OCISy 5206 **MICROCOMPUTER USES IN ELEMENTARY CLASSROOMS.** 3 degree credits, \$Elem 5140, \$141.75.

Use of microcomputers to enhance instruction; applications in language arts, mathematics, science, social studies; evaluation of available programs. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Elem 5140. A joint Day/Extension class limited to 6 Extension students)

Fall Qtr Sec 1 T—4:15-7, PeikH 355, Stochl

- ★OCISy 5207 **APPLICATIONS OF VIDEO IN EDUCATION.** 4 degree credits, \$189.

Uses and design of video systems; instruction, training, simulation, counseling, and research. **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 6 Extension students)

Spring Qtr Sec 1 W—4:15-6, EdHAn 64

- ★OCISy 5209 **PRINCIPLES AND PROCEDURES IN DESIGNING INSTRUCTION.** 4 degree credits, \$189.

Major models of instructional development; generic components; design models; review of instructional design and learning environments. **Must be taken A-N.** (Prereq 5000. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Spring Qtr Sec 1 Th—4:15-6, EdHAn 64, Carrier

- ★OCISy 5212 **PREPARATION OF MEDIA MATERIALS: COMPUTER.** 2 degree credits, \$SeEd 5212, \$94.50.

Prototype development of instructional materials using computer materials. **Must be taken A-N.** (Prereq 5201, 5205, SeEd 5201, 5205. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Spring Qtr Sec 1 W—4:15-6, PeikH 355, Trollip

- ★OCISy 5216 **INSTRUCTIONAL SIMULATIONS AND LEARNING GAMES: DEVELOPMENT AND CLASSROOM USE.** 3 degree credits, \$SeEd 5131, \$141.75.

Background, development factors, subject-matter models, procedures for use of materials; analysis of value of such materials. **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 6 Extension students)

Winter Qtr Sec 1 W—4:15-7, PeikH 355, Trollip

- ★OCISy 5507 **SEMINAR: PRACTICAL RESEARCH IN CURRICULUM AND INSTRUCTION.** 1-4 degree credits, \$SeEd 5174, \$47.25 per credit.

Topics appropriate to current research activities and plans of the participant selected to provide perspective on all components of a practical research endeavor;
(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

measurement and research design; hands-on computer analysis of data. **Must be taken A-N.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)
Winter Qtr Sec 1 Arr, Ahlgren

★OCISy 5600 **INTRODUCTION TO CURRICULUM SYSTEMS.** 3 degree credits, \$SeEd 5113, \$141.75.

Exploration of forces influencing goals and curriculum planning, trends and issues, traditional and emergent curricular designs, current proposals for change; models for curriculum planning. **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 6 Extension students)

Fall Qtr Sec 1 W—4:15-6, EdHAN 64, Kimpston

★OCISy 5605 **PRINCIPLES AND PROCEDURES IN DESIGNING CURRICULUM.** 3 degree credits, \$SeEd 5114, \$141.75.

Systematic curriculum planning; students develop models for planning, formulate plans, and outline a curriculum design for an educational setting. **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 6 Extension students)

Winter Qtr Sec 1 W—4:15-6, EdHAN 64, Kimpston

★OCISy 5700 **CURRICULUM PLANNING PROCESSES.** 4 degree credits, \$SeEd 5170, \$189.

Analyzing models using a specific educational setting to plan a solution to a particular problem; needs assessment and design. **Must be taken A-N.** (Prereq 5600 or SeEd 5113 or Elem 5100. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Spring Qtr Sec 1 W—4:15-6:15, EdHAN 64, Kimpston

★OCISy 5800 **SUPERVISION OF SECONDARY INSTRUCTION.** 3 degree credits, \$SeEd 5172, \$141.75.

Achievement of appropriate teaching expectations focusing on problems of personnel responsible for their improvement. **Must be taken A-N.** (Prereq 5600 or SeEd 5113. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Winter Qtr Sec 1 T—7-9, EdHAN 64, E Anderson

D

Dance (Dnce) College of Education

(School of Physical Education, Recreation, and School Health Education)

Textbooks for most Dnce courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

(See also Physical Education, Recreation, and MacPhail Center for the Arts)

Judith Bonsignore, Lecturer

Heidi Jasmin, Teaching Specialist

Nadine Jette, Associate Professor

Mary B. Lampe, Associate Professor

**School of Physical Education, Recreation, and School Health Education
CONTINUING EDUCATION**

A wide variety of programs in school health education, physical education, dance, and recreation is available to local school districts who wish to jointly design a continuing education experience to meet unique local staff needs. For further information in regard to individually designed programs for a particular district or building staff contact: Mary Lampe, Coordinator, Continuing Education for the School of Physical Education, Recreation, and School Health Education, 101 Norris Hall, 172 Pillsbury Drive S.E., University of Minnesota, Minneapolis, MN 55455; or call (612) 373-3206.

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.

Dance (Dnce) courses (numbered through 1499) may be taken S-N. Those numbered 1500 and above may not be taken S-N by Education students.

★Dnce 1022 BALLROOM DANCE. 1 degree credit, \$37.

Elementary steps and variations of the foxtrot, waltz, tango, samba, cha-cha, rumba, and swing. (No prereq. Limited to 25 each section)

Fall Qtr Sec 1 **M**—7-9, PeikH Gym G100, Lampe (men only)
Sec 2 **M**—7-9, PeikH Gym G100, Lampe (women only)

Spring Qtr Sec 3 **M**—7-9, PeikH Gym G100, Lampe (men only)
Sec 4 **M**—7-9, PeikH Gym G100, Lampe (women only)

★Dnce 1024 MODERN DANCE. 1 degree credit, \$37.

Introduction to fundamental techniques of modern dance. (No prereq. Limited to 20)

Fall Qtr Sec 1 **M**—6:10-8:10, NorrisH 67, Jette
Sec 2 **W**—6:10-8:10, NorrisH 67, Jette

Winter Qtr Sec 3 **M**—6:10-8:10, NorrisH 67, Jette
Sec 4 **W**—6:10-8:10, NorrisH 67, Jette

Spring Qtr Sec 5 **W**—6:10-8:10, NorrisH 67, Jette

★Dnce 1025 BALLET. 1 degree credit, \$37.

Fundamentals of classical ballet techniques including barre and center work. (No prereq. Limited to 20)

Fall Qtr Sec 1 **T**—7-9, NorrisH 67
Sec 2 **Th**—7-9, NorrisH 67

Winter Qtr Sec 3 **T**—7-9, NorrisH 67

Spring Qtr Sec 4 **T**—7-9, NorrisH 67

★Dnce 1122 BALLROOM DANCE. 1 degree credit, \$37.

Second level steps of the foxtrot, waltz, tango, samba, cha-cha, rumba, and swing. (Prereq 1022 or equivalent. Limited to 25 each section)

Winter Qtr Sec 1 **M**—7-9, PeikH Gym G100, Lampe (men only)
Sec 2 **M**—7-9, PeikH Gym G100, Lampe (women only)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★Dnce 1124 MODERN DANCE. 1 degree credit, \$37.

Basic techniques of modern dance and improvisation. (Prereq 1024 or equivalent. Limited to 20)

Winter Qtr Sec 1 M—6:10-8:10, PeikH Gym G65, Jasmin

Spring Qtr Sec 2 M—6:10-8:10, PeikH Gym G65, Jasmin

★Dnce 1125 BALLET. 1 degree credit, \$37.

Fundamentals of classical ballet techniques including barre, center work and combinations. (Prereq 1025 or #. Limited to 20)

Winter Qtr Sec 1 Th—7-9, NorrisH 67

★Dnce 1222 BALLROOM DANCE. 1 degree credit, \$37.

English quickstep and waltz, bolero, mambo; advanced routines for tango, cha-cha, swing, and current novelty dances. (Prereq 1122 or equivalent. Limited to 15 each section)

Spring Qtr Sec 1 W—7-9, PeikH Gym 65, Lampe (men only)

Sec 2 W—7-9, PeikH Gym 65, Lampe (women only)

★Dnce 1224 MODERN DANCE. 1 degree credit, \$37.

Modern dance technique and its relationship to form, design and exploration. (Prereq 1124 or equivalent. Limited to 20)

Spring Qtr Sec 1 T—6:10-8:10, PeikH Gym G65, Bonsignore

★Dnce 1225 BALLET. 1 degree credit, \$37.

Fundamentals of classical ballet techniques including barre, center work, combinations, adagio, and allegro movements. (Prereq 1125 or #. Limited to 20)

Spring Qtr Sec 1 Th—7-9, NorrisH 67

Danish

(See Scandinavian Languages)

Decision Sciences (DSci) School of Management

Textbooks for most DSci courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450)

Carl R. Adams, Professor of Management Sciences

John C. Anderson, Associate Professor of Management Sciences

P. George Benson, Associate Professor of Management Sciences

Norman L. Chervany, Professor of Management Sciences

Gretchen Donahue, Instructor in Quantitative Analysis

Bruce R. Feiring, Assistant Professor of Management Sciences

G. Edward Fox III, Assistant Professor of Management Sciences

Paul E. Johnson, Professor of Management Sciences

Christopher J. Nachtsheim, Associate Professor of Management Sciences

Gerald F. Smith, Assistant Professor of Management Sciences

Robert VanCleave, Senior Time Sharing Analyst, Medtronic

Business degree students must take Decision Sciences courses A-N.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★DSci 1050 (formerly QA 1050) **ELEMENTARY MANAGERIAL STATISTICS**. 4 degree credits, \$148 plus \$8.50 course fee and \$6 special fee. Total \$162.50.

Introduction to quantitative decision making. Probabilistic and statistical techniques for decision making and data analysis, e.g., laws of probability, sampling, estimation, hypothesis testing, and regression. (Prereq Math 1111 or equivalent or Math 1131. Limited to 200)

Fall Qtr Sec 1 T—5:30-9, AndH 310

Winter Qtr Sec 2 Th—5:30-9, AndH 310

Spring Qtr Sec 3 W—5:30-9, AndH 310

★DSci 3050 (formerly QA 3053) **STATISTICAL METHODS FOR MANAGERIAL DECISION MAKING**. 4 degree credits, \$179 plus \$8.50 course fee. Total \$187.50.

Review of estimation and testing procedures; regression analysis, analysis of variance, applications to managerial problems. (Prereq 1050 and at least 90 credits completed or in progress. **Open to nondegree students with equivalent experience.** Limited to 30)

Spring Qtr Sec 1 W—5:30-8:50, BlegH 260

★DSci 3055 (formerly QA 3055) **INTRODUCTION TO MANAGEMENT SCIENCES**. 4 degree credits, \$179 plus \$8.50 course fee and \$6 special fee. Total \$193.50.

Analytical approaches and quantitative reasoning in management problems, stressing problem formulation, analytical methods for solution, and use of computer models. Topics include: management science concepts, decision theory, simulation, linear programming, and implementation. (Prereq 1050, Math 1142 or equivalent and 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, AndH 330

Sec 2 Th—5:30-8:50, AndH 230

Winter Qtr Sec 3 M—5:30-8:50, BlegH 155

Sec 4 W—5:30-8:50, BlegH 155

Spring Qtr Sec 5 T—5:30-8:50, BlegH 155

Sec 6 W—5:30-8:50, BlegH 155

Dentistry

For information on noncredit conferences or workshops in dentistry, please contact the director, Continuing Dental Education, Room 6-406 Moos Health Science Tower, 515 Delaware Street S.E., University of Minnesota, Minneapolis 55455; telephone 373-7961.

Design (Dsgn)

College of Home Economics

(Department of Design, Housing, and Apparel)

Textbooks for Dsgn courses held on the St. Paul campus are available at Books Underground (373-0800); books for courses on the Minneapolis campus are at the Minnesota Book Center in Williamson Hall (373-3688).

Only courses which have 5 as the second digit may be used in a degree program. Courses which have 2 and 4 as the second digit may be used as electives on degree programs or, where subject content is evaluated the same, they may meet degree requirements. The

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

following Dsgn courses may not be used to satisfy major requirements: 1451, 1452, 1453, 1454, 3451, 3453, 3477. Students interested in a degree should obtain a copy of the College of Home Economics bulletin.

The commercial art certificate, formerly offered by the Studio Arts department, is now offered by the Design department. For the commercial art certificate requirements, see the Degrees and Certificates section of this Bulletin.

For further information, call Extension Counseling at 373-3905.

Richard Abell, Associate Professor of Design
 Janice Anderson, Teaching Specialist in Design
 Harris Birkeland, Teaching Specialist in Design
 Charlene Burningham, Assistant Professor of Design
 James Cherry, Teaching Specialist in Design
 Alexander Dekker, Lecturer in Design
 Ann M. Erickson, Associate Professor of Design
 Mark Feyereisen, Teaching Specialist in Design
 Evelyn Franklin, Assistant Professor of Design
 Delores A. Ginthner, Assistant Professor of Design
 Michael Hopkins, Lecturer in Design
 Harold Hussung, Lecturer in Design
 Gale Ikola, Teaching Specialist in Design
 Henning Jensen, Lecturer in Design
 Charlotte Jirousek, Teaching Specialist in Design
 John Keely, Lecturer in Design
 Frederick Klein, Lecturer in Design
 Shelly Madson, Teaching Specialist in Design
 Virginia Nagle, Associate Professor of Design
 Phillip Platt, Teaching Specialist in Design
 Patrick Redmond, Teaching Specialist in Design
 James Smith, Lecturer in Design

Commercial Art Courses

★Dsgn 1201 INTRODUCTION TO COMMERCIAL ART (formerly ArtS 1201). 4 degree credits, \$148.

Overview of advertising communications process, history, and contemporary practices. Emphasis on role of commercial artist (in relationship to the business community and the consumer). Terminology and technology of the field are introduced. Field trips. (No prereq. Limited to 28)

Fall Qtr Sec 1 **M**—6:10-8:10, McNH 216, StP Campus, Redmond
 Sec 2 **T**—6:10-8:10, RarigC 610, Klein
 Sec 3 **W**—6:10-8:10, RarigC 610, Klein

Winter Qtr Sec 4 **T**—6:10-8:10, RarigC 610, Klein
 Sec 5 **W**—6:10-8:10, RarigC 610, Klein

Spring Qtr Sec 6 **M**—6:10-8:10, McNH 216, StP Campus, Feyereisen
 Sec 7 **W**—6:10-8:10, RarigC 610, Klein

★Dsgn 1202 COMMERCIAL DRAWING I (formerly ArtS 3202). 4 degree credits, \$148.

The theory and application of drawing techniques for commercial design and illustration. Developing the ability to render a variety of subject matter utilizing the
 (continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

mediums of pencil, marker, pen and ink, and pastel. (Prereq 1201, Dsgn 1521 or #. Limited to 26)

Fall Qtr Sec 1 **Th**—6:10-9:55, McNH 258, StP Campus

Winter Qtr Sec 2 **W**—6:10-9:55, AgEng 315, StP Campus, Keely

Spring Qtr Sec 3 **Th**—6:10-9:55, McNH 258, StP Campus, Keely

★Dsgn 1220 **COMMERCIAL ART MEDIA AND STUDIO TECHNIQUES (formerly Arts 3220)**. 4 degree credits, \$148.

Commercial art media and techniques; color separations, lettering and calligraphy, commercial art tools and terms. Practice and principles; supplemented by field trip. (Prereq 1202 or #. Limited to 24)

Winter Qtr Sec 1 **M**—6:10-9:55, AgEng 315, StP Campus, Ikola

Sec 2 **T**—6:10-9:55, McNH 262, StP Campus, Jensen

Spring Qtr Sec 3 **M**—6:10-9:55, McNH B3, StP Campus, Ikola

Sec 4 **Th**—6:10-9:55, McNH B3, StP Campus, Jensen

★Dsgn 1231 **COMMERCIAL ILLUSTRATION I (formerly Arts 3231)**. 4 degree credits, \$148.

Projects in various media involving all advertising subject matter. Advertising and story illustration with emphasis on current trends. (Prereq 1220, Dsgn 1523 or #. Limited to 25)

Fall Qtr Sec 1 **W**—6:10-9:55, McNH 258, StP Campus, Smith

★Dsgn 1251 **ADVERTISING DESIGN I (formerly Arts 3251)**. 4 degree credits, \$148.

Layout techniques, materials, and structure. Application of type style and copy fitting. (Prereq 1220 or #. Limited to 25)

Fall Qtr Sec 1 **M**—6:10-9:55, McNH 258, StP Campus, Hussung

Sec 2 **T**—6:10-9:55, McNH 258, StP Campus, Jensen

Winter Qtr Sec 3 **W**—6:10-9:55, McNH 258, StP Campus, Anderson

Spring Qtr Sec 4 **T**—6:10-9:55, AgEng 315, StP Campus, Redmond

★Dsgn 3202 **COMMERCIAL DRAWING II (formerly Arts 3203)**. 4 degree credits, \$196.

Emphasis on further development of visual and technical skills. Transparent and opaque washes; ink line, dry brush, etc. Prereq 1202 or #. Limited to 24)

Spring Qtr Sec 1 **W**—6:10-9:55, AgEng 315, StP Campus, Smith

★Dsgn 3240 **COMMERCIAL ILLUSTRATION II (formerly Arts 0240)**. 4 degree credits (maximum 12 credits), \$196.

Further development of illustration skills with encouragement of individual directions. Studio experiences in the media and techniques of commercial illustration. (Prereq 1231 or #. Limited to 24)

Winter Qtr Sec 1 **Th**—6:10-9:55, McNH 316, StP Campus, Smith

★Dsgn 3252 **ADVERTISING DESIGN II (formerly Arts 3252)**. 4 degree credits, \$196.

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 1251 or #. Limited to 25)

Fall Qtr Sec 1 **T**—6:10-9:55, AgEng 315, StP Campus, J Anderson

Winter Qtr Sec 2 **M**—6:10-9:55, McNH 258, StP Campus, Hussung

Sec 3 **Th**—6:10-9:55, McNH 262, StP Campus, Jensen

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★Dsgn 3260 **ADVERTISING DESIGN III (formerly ArtS 0260)**. 4 degree credits (maximum 12 credits), \$196.

Continued development of layout skills. Exposure to actual working conditions. Advertising psychology, consumer relations, and business management. Orientation in agency, studio, and corporate procedures. (Prereq 3252 or #. Limited to 25)

Winter Qtr Sec 1 **T**—6:10-9:55, McNH 316, StP Campus, Redmond

Spring Qtr Sec 2 **M**—6:10-9:55, AgEng 315, StP Campus, Hussing

Sec 3 **T**—6:10-9:55 McNH 258, StP Campus, Jensen

★Dsgn 3280 **PORTFOLIO AND VISUAL PRESENTATION TECHNIQUES (formerly ArtS 0280)**. 4 degree credits (maximum 12 credits), \$196.

Compilation of individual portfolios; individual and group critiques. Preparation of slides. (Prereq 24 cr of 3xxx courses. Limited to 25)

Fall Qtr Sec 1 **Th**—6:10-9:55, McNH 216, StP Campus, Jensen

★Dsgn 1452 **HOME FURNISHINGS FOR CONSUMERS I**. 4 degree credits, \$148.

Introduction to basic design principles and concepts for consumers including house plans, furniture layout, color, pattern and texture, upholstery fabrics, and wall coverings. Emphasis on kitchens and baths. (No prereq. Limited to 24)

Fall Qtr Sec 1 **TTh**—6:15-8:30, McNH 212, StP Campus, Cherry

★Dsgn 1454 **HOME FURNISHINGS FOR CONSUMERS II**. 4 degree credits, \$148.

Extension of skills developed in 1452 including furniture styles, window treatments, furniture construction, accessories, and lighting. Emphasis on living, dining, and family rooms. (Prereq 1452. Limited to 24)

Spring Qtr Sec 1 **MW**—6:15-8:30, McNH 212, StP Campus, Cherry

Dsgn 1501 **INTRODUCTION TO DESIGN**. 3 degree credits, \$111.

Awareness of design in the near environment. (No prereq)

Fall Qtr Sec 1 **T**—6:10-8:55, McNH 69, StP Campus, Jirousek

Spring Qtr Sec 2 **T**—6:10-8:55, McNH 69, StP Campus, Jirousek

★Dsgn 1521 **DESIGN PROCESS: COLOR**. 4 degree credits, \$148 plus \$4 course fee. Total \$152.

Study of color concepts and their applications to design. Students will also be required to purchase supplies for this class which will exceed \$100. (No prereq. Limited to 24)

Fall Qtr Sec 1 **MW**—6:10-8:30, McNH 262, StP Campus

Sec 2 **TTh**—6:10-8:30, McNH 262, StP Campus

Winter Qtr Sec 3 **MW**—6:10-8:30, McNH 262, StP Campus

Spring Qtr Sec 4 **TTh**—6:10-8:30, McNH 262, StP Campus

★Dsgn 1523 **DESIGN PROCESS: VISUAL PRESENTATION I**. 4 degree credits, \$148.

Development of basic skills in drawing for the designer. (No prereq. Limited to 24)

Fall Qtr Sec 1 **MW**—6:10-8:30, McNH B3, StP Campus, Abell

Winter Qtr Sec 2 **TTh**—6:10-8:30, McNH B3, StP Campus

Spring Qtr Sec 3 **MW**—6:10-8:30, McNH 258, StP Campus

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★Dsgn 1525 **DESIGN PROCESS: TWO DIMENSIONAL DESIGN I.** 4 degree credits, \$148.

Experiments with principles of two-dimensional design. (No prereq. Limited to 24)

Fall Qtr Sec 1 **TTh**—6:10-8:30, McNH B3, StP Campus

Winter Qtr Sec 2 **TTh**—6:10-8:30, McNH 258, StP Campus

Spring Qtr Sec 3 **TTh**—3:30-5:50, McNH 258, StP Campus

★Dsgn 1526 **PRESENTATION TO CLIENTS.** 3 degree credits, \$111.

Designed to assist the consultant in a client-consultant relationship to attain and maintain a high level of performance and to present ideas or product in the most favorable manner possible. (No prereq. Limited to 24)

Winter Qtr Sec 1 **M**—6:10-8:30, McNH 216, StP Campus, Madson

★Dsgn 1531 **SURFACE-FABRIC DESIGN I.** 4 degree credits, \$148 plus \$30 course fee. Total \$178.

Exploration of surface pattern and composition with varied media and materials: dyeing, resist, batik, stencil, block printing and other. (Prereq 1521, 1523, 1525 or #. Limited to 18)

Fall Qtr Sec 1 **Sa**—9:30 a.m.-1 and Arr., McNH B9, StP Campus, Abell

Winter Qtr Sec 2 **Sa**—9:30 a.m.-1 and Arr., McNH B9, StP Campus, Abell

★Dsgn 1532 **STRUCTURE FABRIC DESIGN I.** 4 degree credits, \$148.

Individual designing with loomed and non-loomed structural techniques; weaving, macrame, plaiting, stitchery and others. (Prereq 1521, 1523, 1525 or #. Limited to 20)

Fall Qtr Sec 1 **MWF**—9 a.m.-10:45, McNH 16, StP Campus, Burningham
Sec 2 **W**—6-9:55 and Arr., McNH 16, StP Campus, Burningham

Winter Qtr Sec 3 **MWF**—9 a.m.-10:45, McNH 16, StP Campus, Burningham

Spring Qtr Sec 4 **MWF**—9 a.m.-10:45, McNH 16, StP Campus, Burningham

★Dsgn 1533 **METALSMITHING: INTRODUCTION TO TECHNIQUES.** 4 degree credits, \$148.

Introduction to techniques used in contemporary metalsmithing and jewelry making. (Prereq 1521, 1523, 1525, or #. Limited to 18)

Fall Qtr Sec 1 **MW**—6:10-8:30, McNH 10, StP Campus

Winter Qtr Sec 2 **MW**—6:10-8:30, McNH 10, StP Campus

★Dsgn 1550 **DRAFTING—BASIC DRAFTING TECHNIQUES (formerly 1450).** 4 degree credits, \$148.

Architectural drafting instruction in the use of drafting instruments. Emphasis on plans, elevations, details, and architectural symbols and vocabulary as related to Interior Design. (No prereq. Limited to 24)

Fall Qtr Sec 1 **MW**—3:30-5:50, McNH 305, StP Campus, A Dekker

Sec 2 **MW**—6:20-8:30, McNH 305, StP Campus, A Dekker

Sec 3 **TTh**—6:20-8:30, McNH 305, StP Campus, A Dekker

Winter Qtr Sec 4 **MW**—3:30-5:50, McNH 305, StP Campus, A Dekker

Sec 5 **MW**—6:20-8:30, McNH 305, StP Campus, A Dekker

Spring Qtr Sec 6 **MW**—3:30-5:50, McNH 316, StP Campus, A Dekker

Sec 7 **MW**—6:20-8:30, McNH 316, StP Campus, A Dekker

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Dsgn 1552 INTRODUCTION TO HOUSING AND INTERIOR DESIGN. 3 degree credits, \$1551, \$111.

Problems involved in choosing location and planning or selecting dwelling unit and its furnishings. Emphasis on design and appraisal of individual and family needs. (Prereq soph)

Winter Qtr Sec 1 T—6-8:30, McNH 33, StP Campus, Nagle

Dsgn 3412 HISTORY OF TRADITIONAL FURNITURE. 4 degree credits. **Tentatively scheduled for 1985-86.**

★Dsgn 3450 PERSPECTIVE AND PRESENTATION SKETCHES. 4 degree credits, \$3550, \$196.

Instruction in the various methods of perspective, pencil techniques, shades and shadows, in plan and in perspective. Free-hand sketches of furnishings and details. Finished renderings in perspective for final presentation as related to interior design. (Prereq 1450 or 1550. Meets concurrently with 3550. Limited to a combined total of 24)

Spring Qtr Sec 1 TTh—6:15-8:30, McNH 305, StP Campus, Birkeland

★Dsgn 3451 (replaces 3455) INTERIOR PROBLEMS III: CERTIFICATE. 4 degree credits. **Final offering tentatively scheduled for fall 1985.**

★Dsgn 3453 INTERIOR PROBLEMS IV: CERTIFICATE. 4 degree credits, \$196.

Advanced Interior Design including architectural symbols and their usage in professional presentation, programming, and planning of contract interiors. (Prereq 3451. Limited to 25)

Fall Qtr Sec 1 TTh—6:15-8:30, McNH 316, StP Campus

★Dsgn 3477 CONTRACT DESIGN PROBLEMS. 4 degree credits, \$196.

Problems in designing of contract and institutional interiors. (Prereq 1453 or 1456 or #. Limited to 25)

Spring Qtr Sec 1 MW—6:15-8:30, WullH 240, Hopkins

★Dsgn 3521 DESIGN PROCESS: COLOR II. 4 degree credits, \$196.

Continued study of color concepts and their application to design. (Prereq 1521, 1523, or #. Limited to 24)

Spring Qtr Sec 1 MW—6:10-8:30, McNH 262, StP Campus

★Dsgn 3523 DESIGN PROCESS: VISUAL PRESENTATION II. 4 degree credits, \$196.

Continued development of drawing skills for the designer. (Prereq 1523. Limited to 24)

Winter Qtr Sec 1 MW—6:15-8:30, McNH B3, StP Campus, Abell

Spring Qtr Sec 2 W—6-9:30 and Arr., McNH B3, StP Campus, Abell

★Dsgn 3531 SURFACE-FABRIC DESIGN II. 4 degree credits, \$196.

Selection from printed or dyed textiles. (Prereq 1521, 1531, 1523 or #. Limited to 20)

Spring Qtr Sec 1 Sa—9:30 a.m.-1 and Arr., McNH B9, StP Campus, Abell

★Dsgn 3532 FIBER STRUCTURE: WEAVING. 4 degree credits, \$196.

Beginning loom techniques. Studio problems. (Prereq 1532. Limited to 16)

Fall Qtr Sec 1 MWF—1-2:45, McNH 16, StP Campus, Burningham

Winter Qtr Sec 2 W—6-9:55 and Arr., McNH 16, StP Campus, Burningham

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★Dsgn 3533 METALSMITHING FABRICATION. 4 degree credits, \$196.

Techniques of raising and forging and other noncasting techniques to create useful objects. (Prereq 1533. Meets concurrently with 3536. Limited to a combined total of 18)

Spring Qtr Sec 1 MW—6:10-8:30, McNH 10, StP Campus

★Dsgn 3536 METALSMITHING: ENAMELING. 4 degree credits, \$196.

Enamel used as surface decoration on metal jewelry or other useful objects. (Prereq 1533 or #, some metals experience. Meets concurrently with 3533. Limited to a combined total of 18)

Spring Qtr Sec 1 MW—6:10-8:30, McNH 10, StP Campus

★Dsgn 3537 FIBER STRUCTURE: OFF LOOM. 4 degree credits, \$196.

Exploration of off-loom fiber design and techniques in quilting needlepoint, stitchery, and traditional embroidery. Studio problems. (Prereq 1532, 1521, 1523, 1525 or #. Limited to 20)

Winter Qtr Sec 1 MWF—1-2:45, McNH 16, StP Campus, Burningham

Spring Qtr Sec 2 W—6-9:55, McNH 16, StP Campus, Burningham

★Dsgn 3548 LIGHTING DESIGN FOR ENVIRONMENTAL SPACES (formerly 3448). 3 degree credits, \$147.

Examination of types and uses of lighting, its relationship to color, and energy conservation. Evaluation of light quantity and quality for residential and contract spaces. (No prereq. A joint Day/Extension class limited to 60 Extension students)

Spring Qtr Sec 1 TTh—4-5:45, McNH 33, StP Campus, Ginthner

★Dsgn 3550 INTERIOR DESIGN PRESENTATION. 3 degree credits, \$3450, \$147.

Perspective drawing and methods of rapid rendering for interiors. (Prereq 1555, Δ, and pass portfolio review for Interior Design Program; 1550 for Commercial Art Program. Meets concurrently with 3450. Limited to a combined total of 24)

Spring Qtr Sec 1 TTh—6:15-8:30, McNH 305, StP Campus, Birkeland

★Dsgn 3551 INTERIOR DESIGN RENDERING (formerly 3451). 3 degree credits, \$147.

Advanced rendering techniques in various media. (Prereq 3450 or 3550. Limited to 24)

Fall Qtr Sec 1 MW—6:15-8:30, McNH 316, StP Campus, Birkeland

★Dsgn 3553 INTERIOR DESIGN II. 4 degree credits. Tentatively scheduled for 1985-86.

★Dsgn 3559 BUSINESS PROCEDURES AND CLIENT RELATIONSHIPS (formerly 3459). 3 degree credits. Tentatively scheduled for 1985-86.

★Dsgn 3562 REAL ESTATE PRACTICES I. 3 degree credits, \$147.

The basics of the real estate business including appraisal, property management, sales brokerage financing, real estate investments, land development, and preparation of essential contracts. (No prereq. Meets concurrently with RE 0801C. Limited to a combined total of 100)

Fall Qtr Sec 1 T—6:10-9:10, AndH 330

Spring Qtr Sec 2 T—6:10-9:10, AndH 330

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Dsgn 3571 PROFESSIONAL ISSUES IN APPLIED DESIGN. 1 degree credit, \$49.

Discussion of problems in the field, possible goals, and professionalism. Assigned readings and reports. (Prereq senior in Design)

Fall Qtr Sec 1 M—4-5, McNH 216, StP Campus, Anderson

Hsg 5301 THE FAMILY AND ENERGY ISSUES. See this course described in the new Housing section of this Bulletin.**★Dsgn 5515 20TH-CENTURY INTERIORS AND FURNISHINGS.** 3-4 degree credits, \$49 per credit.

In-depth study of 20th century design for interiors and furnishings from Victorian to the present time. (Prereq 5514 or #. May not be taken for graduate credit. A joint Day/Extension class limited to 35 Extension students)

Spring Qtr Sec 1 MW—3-4:15, McNH 33, StP Campus, Nagle

★Dsgn 5532 FIBER STRUCTURE DESIGN. 4 degree credits, \$196.

Designing in one special structural textile technique—floor loom weaving and/or off-loom fiber technique. **Cost of materials extra.** (Prereq 3532. Qualified students may register for graduate credit at the University of Minnesota. Limited to 16)

Spring Qtr Sec 1 MWF—1-2:45, McNH 16, StP Campus, Burningham

★Dsgn 5552 INTERIOR DESIGN III: RESIDENTIAL DESIGN. 4 degree credits, \$196.

Advanced problems in planning and furnishing residential spaces to meet individual or family needs. (Prereq 3553, 3557, TexC 3621, FSoS 1401, or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 24)

Spring Qtr Sec 1 MW—5-8, McNH 305, Erickson

★Dsgn 5554 INTERIOR DESIGN IV: CONTRACT DESIGN. 4 degree credits, \$196.

Design problems related to commercial interiors. (Prereq 3553, 3557, TexC 3621, or #; ForP 3310, TexC 3622 recommended. Qualified students may register for graduate credit at the University of Minnesota. Limited to 24)

Winter Qtr Sec 1 TTh—6:15-8:30, McNH 305, StP Campus

★Dsgn 5571 SPECIAL TOPICS IN APPLIED DESIGN: COMPLEX WEAVES: FROM THE TRADITIONAL FLOOR LOOM TO THE JACQUARD. 3 degree credits, \$147 plus \$16 course fee. Total \$163.

Studio experience in multiharness weaving, including the dobby and the Jacquard loom. Drafting and design of complex weaves. (Prereq Dsgn 3532 or other beginning floor loom class. Qualified students may register for graduate credit at the University of Minnesota. Limited to 18)

Fall Spec Term Sec 1 MTWThF—9 a.m.-2:30, Sept. 5-19, McNH 16, StP Campus, Jirousek

No late fee through Aug. 29

Offered through Continuing Education for Women

CEW

See Housing (Hsg) for other courses offered by the Department of Design, Housing, and Apparel.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Dutch (Dtch)

College of Liberal Arts

Textbooks for most Dtch courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

Hinke van Kampen, Teaching Assistant
Jan Willem Holsbergen, Dutch Writer-in-Residence

A MINOR IN DUTCH CAN BE COMPLETED IN THE EVENING.

Required Preparatory Courses: 1101-1102-1103 or 1110; 1104-1105.

Minor Requirements: 3011, 8 cr of 3310, 3510, two courses to be chosen with the help of an adviser.

Read about language laboratories on page 56.

- ★**0Dtch 1101-1102-1103-1104-1105 BEGINNING AND INTERMEDIATE DUTCH: CLASSROOM READING, LISTENING, WRITING, SPEAKING.** 5 degree credits each quarter for 1101, 1102, 1103, 1104, \$185 each quarter. 4 degree credits for 1105, \$148.

Early emphasis on structure. Language skills are emphasized sequentially as follows: listening and reading comprehension, writing, speaking. (No prereq for 1101; 1101 or 5 cr of 1110 for 1102; 1102 or 10 cr of 1110 for 1103; 1103 or 15 cr of 1110 for 1104; 1104 for 1105. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr	1101	Sec 1	MWTh —5:15-6:30, JonesH 1, Van Kampen
	1104	Sec 2	MTTh —5:15-6:30, FolH 208, Holsbergen
Winter Qtr	1102	Sec 3	MWTh —5:15-6:30, JonesH 1, Van Kampen
	1105	Sec 4	MTTh —5:15-6:15, FolH 208, Holsbergen
Spring Qtr	1103	Sec 5	MWTh —5:15-6:30, JonesH 1, Van Kampen

- Dtch 1110 BEGINNING DUTCH: INDIVIDUALIZED READING, LISTENING, WRITING.**
3 degree credits (15 credits maximum), \$1101-1102-1103, \$111.

Structure, writing, and comprehension. Students work at own pace with book, computer, and audio tapes, earning credit as they progress through material. Teacher available for consultation and testing. Two weeks after the end of the quarter, students who have completed more than 3 credits during the quarter should come in to the 101 Wesbrook Hall Registration Office to pay for the additional credits they have earned during that quarter. (No prereq)

Fall Qtr	Sec 1	T —6-8:30, WaLib 111
Winter Qtr	Sec 2	T —6-8:30, WaLib 111
Spring Qtr	Sec 3	T —6-8:30, WaLib 111

- 0Dtch 3011-3012 CONVERSATION AND COMPOSITION.** 4 degree credits, \$154.
Spoken Dutch; composition; development of vocabulary; grammar review. (Prereq 1105 or # for 3011. 3011 and 3012 meet concurrently. A joint Day/Extension class)

Spring Qtr Sec 1 **MTTh**—5:15-6:30, FolH 208, Holsbergen

- 0Dtch 3310 STUDIES IN DUTCH AUTHORS.** 4 degree credits, \$154.
One author studied in depth (Vondel, Multituli, Bomans, and others). (Prereq 1103 or 15 cr of 1110 or #. May be repeated for credit. A joint Day/Extension class)

Spring Qtr Sec 1 **MTTh**—4:15-5, FolH 205, Holsbergen

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

ODtch 3510 TOPICS IN DUTCH CULTURE: PAINTING AND PROSE IN HOLLAND TODAY. 4 degree credits, \$154.

A single topic of Dutch culture explored in depth. Topics vary. **Requires no knowledge of Dutch.** (No prereq. May be repeated for credit. A joint Day/Extension class)

Fall Qtr Sec 1 **MTTh**—4:15-5, FolH 208, Holsbergen

ODtch 3610 DUTCH AUTHORS IN TRANSLATION. 4 degree credits, \$154.

One author studied in depth (Vondel, Multituli, Bomans, and others). **Requires no knowledge of Dutch.** (No prereq. May be repeated for credit. May be applied toward the CLA second language requirement, Route II [see page 562]. A joint Day/Extension class)

Winter Qtr Sec 1 **MTTh**—4:15-5, FolH 205, Holsbergen

(See also German)

E

Early Childhood Studies Program

(Department of Continuing Education in Social Work and Nursing)

Program Director: Mary Lou Gilstad

Training Coordinator: Trish Blomquist

Instructors: Jane Adolf, Erna Fishhaut, Beth Koskie, Joan McLaughlin, Joanne Parker, Robert Weigand

CDA Trainers: Lauri Carlson, Beth Koskie, Lillian Stenehjem, Ruth Ouverson, Ann Anderson

Family Day Care Trainers: Barbara Dawson, Annette Gagliardi, Beverly Lewanski, Judy Muenzhuber, Deb Bohn, Sue Boettcher

Family-Based Service Staff: Marlys Johnson, Mary Anderson, Mary Kay Carle, Marlys Vollegraaf, Terry Leinbach

A program within Continuing Education in Social Work and Nursing in cooperation with the College of Education which offers continuing education courses and competency based training for child care workers, nursery school teachers, child care program managers, family day care providers, family based service providers, and Head Start employees. Educ 1100 and CPsy 1310/5310 courses will be offered throughout the year in the evenings or on Saturdays, both on and off campus, and may be applied to a variety of certificate and degree programs. Requests for information regarding courses should be directed to Early Childhood Studies Program, 107 Armory, or call 373-5831. **Students must preregister for a course by calling 373-5831.** Formal registration, including payment, will be handled only by the Early Childhood Studies staff, 107 Armory (373-5831).

East Asian Studies

College of Liberal Arts

Textbooks available at the Minnesota Book Center in Williamson Hall (373-3688).

Edward M. Copeland, Professor of Japanese

Wesley M. Jacobsen, Assistant Professor of Japanese

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Byron K. Marshall, Professor of History
Amy T. Matsumoto, Professor of Japanese
Robert Poor, Professor of Art History

Read about language laboratories on page 56.

Joint Day/Extension Classes

You may register through Extension for most Day School classes scheduled before 4 p.m. in East Asian Studies. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

Chinese (Chn)

The following nonlanguage classes may be applied toward the CLA second language requirement, Route II (see page 562): EAS 1463, 3468, Hist 1463, 3463, 3468, 5468.

Chn 1005-1006 FIRST YEAR ELEMENTARY CHINESE. 4 degree credits each semester, \$148 each semester.

Introduction to modern Chinese conversation and writing included to provide a knowledge of basic sentence patterns and vocabulary. (No prereq for 1005; 1005 or # for 1006)

Fall Sem 1005 Sec 1 **M**—6:20-8:50, JonesH 2

Sec 2 **W**—6:20-8:50, FolH 207

Spring Sem 1006 Sec 3 **W**—6:20-8:50, FolH 207

Chn 1007-1008 SECOND YEAR ELEMENTARY CHINESE. 4 degree credits each semester, \$148 each semester.

A continuation of 1006 intended to expand basic skills in speaking, listening, and reading. Completion of 1008 prepares students for 3021. (Prereq 1006 or # for 1007; 1007 or # for 1008)

Fall Sem 1007 Sec 1 **W**—6:20-8:50, FolH 302

Spring Sem 1008 Sec 2 **W**—6:20-8:50, FolH 302

Japanese (Jpn)

The following nonlanguage class may be applied toward the CLA second language requirement, Route II, (page 562): EAS 1463, 3471, Hist 1463, 3463, 3471, 5471.

Jpn 1005-1006 FIRST YEAR ELEMENTARY JAPANESE. 4 degree credits each semester, \$148 each semester.

Introduction to Japanese conversation and writing included to provide a knowledge of basic sentence patterns and vocabulary. (No prereq for 1005; 1005 or # for 1006)

Fall Sem 1005 Sec 1 **M**—6:20-8:50, JonesH 11

Sec 2 **W**—6:20-8:50, FolH 209

Spring Sem 1006 Sec 3 **W**—6:20-8:50, FolH 209

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Jpn 1007-1008 SECOND YEAR ELEMENTARY JAPANESE. 4 degree credits each semester, \$148 each semester.

A continuation of 1006 intended to expand basic skills on speaking, listening, and reading. Completion of 1008 prepares students for 3021. (Prereq 1006 or # for 1007; 1007 or # for 1008)

Fall Sem 1007 Sec 1 **W**—6:20-8:50, FolH 104

Spring Sem 1008 Sec 2 **W**—6:20-8:50, FolH 104

East Asian Studies (EAS)

EAS 1463 INTRODUCTION TO EAST ASIA IN MODERN TIMES. 4 degree credits, \$Hist 1463, 3463, \$148. (◆\$74)

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. May be applied toward the CLA second language requirement, Route II, for Chinese and Japanese [see page 562])

Fall Qtr Sec 1 **T**—6:20-8:50, BlegH 205, Marshall

EAS 3001 CHINESE/JAPANESE CALLIGRAPHY. 4 degree credits, \$154. (◆\$77)

A brief history of Chinese and Japanese calligraphy styles; esthetic analysis; demonstration and practice of techniques. (No prereq)

Spring Qtr Sec 1 **Sa**—9 a.m.-11, FolH 304, Matsumoto

EAS 3013 INTRODUCTION TO FAR EASTERN ART. 4 degree credits, \$ArH 3013, \$154 plus \$4 course fee. Total \$158. (◆\$77 plus \$4 course fee. Total \$81)

Major themes of Far Eastern Art. The arts of China and Japan (not all-inclusive). (No prereq. Meets concurrently with ArH 3013)

Fall Qtr Sec 1 **T**—6:20-8:50, JonesH 207B, Poor

EAS 3468 PEOPLE'S REPUBLIC OF CHINA: THE COMMUNIST REVOLUTION, 1900 TO PRESENT. 4 degree credits, \$Hist 3468, 5468, \$154.

Introduction of Marxism to China, rise of Communist Party, and development of rural guerrilla movement. Career of Mao Tse-tung and developments in The People's Republic: The Great Leap, Cultural Revolution, Gang of Four. (No prereq. May be applied toward the CLA second language requirement, Route II, for Chinese [see page 562]. Meets concurrently with Hist 3468, 5468)

Spring Qtr Sec 1 **T**—6:20-8:50, BlegH 330

EAS 3471 20TH-CENTURY JAPAN. 4 degree credits, \$Hist 3471, 5471, \$154. (◆\$77)

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. May be applied toward the CLA second language requirement, Route II [see page 562]. Meets concurrently with Hist 3471, 5471)

Winter Qtr Sec 1 **T**—6:20-8:50, BlegH 10, Marshall

EAS 3970 JAPAN AS NUMBER ONE. 4 degree credits, \$154. (◆\$77)

What makes Japan work? A look at the major features of contemporary Japanese society, its social system and underlying cultural patterns that are said to account for its success as an industrial nation. What are the costs in the life of the average family? The school? The company? (No prereq)

Spring Qtr Sec 1 **M**—6:20-8:50, Mgmt/Econ 128, Marshall

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Ecology and Behavioral Biology (EBB)

College of Biological Sciences

Textbooks for most EBB courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

Peter A. Abrams, Associate Professor of Ecology and Behavioral Biology

(See also Biology; BGS 3003, Business and the Natural Environment; General College; IC 0200, Field Ecology in Minnesota; and IC 0224, Winter Ecology in Minnesota)

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Ecology and Behavioral Biology. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

Biol 1106 GENERAL ZOOLOGY. 5 degree credits. See listing under Biology, page 106.

OEBB 3001 INTRODUCTION TO ECOLOGY. 4 degree credits, \$189. (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. A joint Day/Extension class)

Fall Qtr Sec 1 **MW**—6:20-8:05, Zoology 313

★**Biol 5041 ECOLOGY.** 4 degree credits, \$Biol 3041, \$189.

Growth, structure, and evolution of populations. Pairwise biotic interactions between species and their effect on the diversity and structure of natural communities. Nutrient dynamics, function, productivity, and temporal stability of ecosystems. **Must be taken A-N.** (Prereq Math 1142 or 1211, Biol 1103, 1106, or 3011, or 3012. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 35 Extension students)

Winter Qtr Sec 1 **TTh**—Lect, 4-6, Zoology 313, Abrams
T—Rec, 7-8, Zoology 108

Sec 2 **TTh**—Lect, 4-6, Zoology 313, Abrams
Th—Rec, 7-8, Zoology 108

Sec 3 **TTh**—Lect, 4-6, Zoology 313, Abrams
Th—Rec, 12:15-1, Zoology 102

Sec 4 **TTh**—Lect, 4-6, Zoology 313, Abrams
F—Rec, 2:15-3, Zoology 108

Economics (Econ)

College of Liberal Arts

Textbooks for most Econ courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450).

John D. Helmberger, Professor of Agricultural and Applied Economics
Marcel K. Richter, Professor of Economics

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Norman J. Simler, Professor of Economics

Harlan M. Smith, Professor of Economics

John J. Waelti, Professor of Agricultural and Applied Economics

Arley D. Waldo, Professor of Agricultural and Applied Economics

C. Arthur Williams, Professor of Finance and Insurance

Additional staff to be assigned

A MAJOR IN ECONOMICS CAN BE COMPLETED IN THE EVENING.

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

B.A. Major Sequence

Required Preparatory Courses 1001, 1002; Math 1142 or equivalent.

Major Requirements—Minimum of 36 3xxx-5xxx credits* including 3101, 3102 and 3103. (These required courses should be taken as soon as possible. 3101 should be taken first. 3102 and 3103 may be taken simultaneously if desired.) Stat 5021-5022 or equivalent and senior project paper.

Two courses in the major may be taken S-N.

*This may include 2 courses from Acct 3101-3102, BFin 3000, BFin 3300, QA 3055.

A minor in Economics is also available. Interested students should contact the Extension Counseling Office, 373-3905.

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

★Econ 1001, 1002 PRINCIPLES OF ECONOMICS. 4 degree credits each semester, if no credit received for any other beginning economics course, \$148 each semester. (IS)

Principles underlying economic activity and the way these principles work out through our economic institutions. **1001:** Macro-economics: national income, money and banking, economic growth. **1002:** Micro-economics: demand and supply, competition and monopoly, distribution of income, international trade, and current economic problems. (No prereq. Econ 1001 and 1002 may be taken in either order, or may be taken the same evening or the same term in order for the student to progress more rapidly to other courses. **Each section limited to 35 unless otherwise indicated**)

CAMPUS

Fall Sem	1001	Sec 1	M—6:10-7:50, VinH 313
		Sec 2	M—6:10-7:50, VinH 203
		Sec 3	M—8:05-9:45, VinH 313
		Sec 4	M—8:05-9:45, VinH 203
		Sec 5	T—6:10-7:50, ClaOff B25, StP Campus, Waelti
		Sec 6	T—8:05-9:45, VinH 313
		Sec 7	W—6:10-7:50, VinH 313
		Sec 8	W—6:10-7:50, VinH 203
		Sec 9	Th—6:10-7:50, VinH 313
		Sec 10	Th—6:10-7:50, VinH 6
1002	Sec 11	M—8:05-9:45, AkerH 319	
	Sec 12	T—6:10-7:50, VinH 6	
	Sec 13	T—6:10-7:50, VinH 203	

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

	Sec 14	T	—8:05-9:45, VinH 6
	Sec 15	W	—8:05-9:45, VinH 203
	Sec 16	Th	—8:05-9:45, VinH 6
Spring Sem 1001	Sec 17	M	—6:10-7:50, VinH 313
	Sec 18	T	—6:10-7:50, VinH 313
	Sec 19	Th	—6:10-7:50, VinH 313
1002	Sec 20	M	—8:05-9:45, VinH 313
	Sec 21	T	—6:10-7:50, ClaOff B25, StP Campus, Waelti
	Sec 22	T	—8:05-9:45, VinH 313
	Sec 23	W	—6:10-7:50, VinH 313
	Sec 24	Th	—6:10-7:50, VinH 203
	Sec 25	Th	—8:05-9:45, VinH 313

ALEXANDER RAMSEY HIGH SCHOOL, ROSEVILLE

Fall Sem 1001	Sec 26	T	—6-7:40, room 250/251 (Limit 30)
	1002	Sec 27	T—8-9:40, room 250/251 (Limit 30)
Spring Sem 1002	Sec 28	T	—6-7:40, room 250/251 (Limit 30)
1001	Sec 29	T	—8-9:40, room 250/251 (Limit 30)

RICHFIELD SENIOR HIGH SCHOOL

Fall Sem 1001	Sec 30	W	—6:20-8, room 143, Helmberger
Spring Sem 1002	Sec 31	W	—6:20-8, room 144, Helmberger

ROBBINSDALE/ARMSTRONG SENIOR HIGH SCHOOL, PLYMOUTH

Fall Sem 1001	Sec 32	W	—6:20-8, room C-257
	1002	Sec 33	W—8:15-9:55, room C-259
Spring Sem 1002	Sec 34	W	—6:20-8, room C-258

IRONDALE HIGH SCHOOL, NEW BRIGHTON

Fall Sem 1001	Sec 35	T	—7-8:40, room 312 (Limit 30)
Spring Sem 1002	Sec 36	T	—7-8:40, room 312 (Limit 30)

MINNETONKA HIGH SCHOOL

Fall Sem 1001	Sec 37	Th	—7-8:40, room 119
Spring Sem 1002	Sec 38	Th	—7-8:40, room 119

Economics majors and nonmajors

Students should note that Extension Classes will now offer in each field of economics both a course designed for the student who is not an economics major and courses designed for economics majors. Enough of the latter will be offered to enable majors to fulfill the economics requirements for a Bachelor of Arts degree. Most economics courses will be offered on a rotating basis rather than all being offered in any one year. The table below shows the comparable courses for economics majors and for others by fields. In addition to those listed, the following courses are **open to economics majors and non-majors** alike (only prerequisite is Principles of Economics, Econ 1001-1002):

Econ 3021 SURVEY OF ECONOMIC IDEAS

Econ 5021 ECONOMICS, ETHICS AND ECONOMIC PHILOSOPHY

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Econ 5032 CURRENT ECONOMIC ISSUES**Econ 5534 ECONOMIC SECURITY****Courses open to**

	Econ Majors (Pre-requisites usually 3101, 3102)	Non-Majors (Pre-requisites Principles of Economics 1001, 1002)
Economic Development	5331	5301
Comparative Economic Systems	5337	5307
International Economics	5431	5401
Labor Economics	5531	3501
Industrial Organization and Anti-Trust Policy	5631	3601
Money and Banking	5721	3701-5701
Elements of Public Finance	5821	3801

General economics

Econ 3021 SURVEY OF ECONOMIC IDEAS. 3-5 degree credits. **Not offered 1984-85.**

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 1001 and 1002 or #. Student may register for 3, 4 or 5 credits; assignments and examinations will vary accordingly. Term paper required only for 5 credits)

Econ 5021 ECONOMICS, ETHICS, AND ECONOMIC PHILOSOPHY. 3-5 degree credits, \$38.50 per credit.

Topic this term: An Economic Philosophy for Our Times. Course may be taken more than once, with consent of instructor. (Prereq 1001, 1002 or equivalent or #. Students may register for 3, 4 or 5 credits; assignments and examinations will vary accordingly. Term paper required only for 5 credits. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 **Th**—6:10-7:50, BlegH 240, Smith

Econ 5032 CURRENT ECONOMIC ISSUES. 3-5 degree credits. **Not offered 1984-85.**

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 1001, 1002 or #. Student may register for 3, 4, or 5 credits; assignments and examinations will vary accordingly. Term paper required only for 5 credits. Qualified students may register for graduate credit at the University of Minnesota)

Economic theory

★Econ 3101 MICROECONOMIC THEORY. 4 degree credits, \$3105 or BGS 3001, \$154.

Behavior of households, firms and industries under competitive and monopolistic conditions. Factors influencing production, price and advertising decisions. Business degree students admitted prior to the Fall of 1981 may take this course or Econ

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

3105. **Either course must be taken A-N.** (Prereq 1001, 1002, Math 1111 or 1131 or equivalent or #. Limited to 35)

Fall Sem Sec 1 T—6:10-7:50, BlegH 240

Sec 2 W—6:10-7:50, BlegH 420, Richter

Spring Sem Sec 3 M—6:10-7:50, BlegH 235, Richter

★**Econ 3102 MACROECONOMIC THEORY.** 4 degree credits, \$154.

Factors determining the price level, the amount of employment, and unemployment, total spending by consumers, business investment, total savings, GNP and net national income. The effects of taxes and government spending on these. (Prereq 1001, 1002, Math 1111 or 1131 or 1201 or equivalent or #. Limited to 35)

Fall Sem Sec 1 T—6:10-7:50, BlegH 420, Simler

Spring Sem Sec 2 M—6:10-7:50, BlegH 420, Simler

Econ 3103 WELFARE ECONOMICS. 4 degree credits, \$154.

Economics majors are required to take this course to graduate. For others, it is an elective. Economic efficiency and the conditions necessary to sustain it. Conflicts between efficiency and income distribution goals. How market structures and public policies increase or decrease efficiency. (Prereq 3101 or #)

Spring Sem Sec 1 W—6:10-7:50, BlegH 120, Richter

★**Econ 3105 MANAGERIAL ECONOMICS.** 4 degree credits, \$3101, \$BGS 3001, \$154.

Theory of the firm; managerial decision problems. Demand theory. Production technology and cost concepts. Pricing and output decisions. Investment behavior. **Open only to School of Management majors.** Business degree students admitted prior to the Fall of 1981 may take this course or Econ 3101. (Prereq 1001, 1002, 1 qr calculus. Limited to 35)

Fall Sem Sec 1 M—6:10-7:50, BlegH 235, Richter

Development and area studies

Econ 5301 and 5331 ECONOMIC DEVELOPMENT. 4 degree credits. **Not offered 1984-85.**

The role of simple economic principles and of non-economic factors in raising a nation's standard of living. Lessons from the historical development of modern industrial economies. Problems of economic development of the underdeveloped nations today. Development planning. Issues in U.S. policy toward underdeveloped nations. (Prereq 1001 and 1002 for 5301 [not open to economics majors]; 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 degree credits, \$154.

Different economic systems today, including various socialist, communist, and capitalist economies. Economic ideologies and systems; alternative ways to perform basic economic functions; performance and problems of different economic systems; economic planning and the economic roles of government and the market in different countries; relations between different economic systems. (Prereq 1001 and 1002 for 5307 [not open to economics majors]; 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)

Spring Sem Sec 1 Th—6:10-7:50, BlegH 240, Smith

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

International economics

Econ 5401 and 5431 INTERNATIONAL ECONOMICS. 4 degree credits, \$154.

Principal issues involved in international economic relations. Significance of foreign trade and investment, foreign exchange and international payments, the International Monetary Fund and Bank, the old gold standard and the new "paper gold." Arguments over foreign aid policies and tariffs. (Prereq 1001 and 1002 for 5401 [not open to economics majors]; 3101, 3102 or # for 5431. The courses meet concurrently, but only one can be taken for credit. Qualified students may register for graduate credit at the University of Minnesota)

Fall Sem Sec 1 **Th**—8:05-9:45, BlegH 240, Smith

Labor economics

Econ 3501 and 5531 LABOR ECONOMICS. 4 degree credits, \$154. (♦\$77)

An introductory course dealing with the role of labor in the economy; labor as a factor of production; population and the labor force; economics of labor markets; labor market institutions; theories of wages and employment; unions and collective bargaining; current wage and employment practices; public policy. (Prereq 1001 and 1002 or # for 3501 [not open to economics majors]; 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.)

Fall Sem Sec 1 **M**—6:10-7:50, BlegH 420, Simler

(See also IR 3007, Modern Labor Relations)

Econ 5534 ECONOMIC SECURITY. 4 degree credits, \$154.

Nature of economic insecurity caused by death, old age, poor health, unemployment, and poverty. Provisions and economic and social implications of public and private economic security programs. Major emphasis on such public programs as Old Age, Survivors, Disability and Health Insurance (Social Security), Worker's Compensation Insurance, Unemployment Insurance, and Public Assistance. (Prereq 1001, 1002 or equivalent or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Ins 3210, 8210)

Fall Sem Sec 1 **T**—6:10-7:50, BlegH 220, Williams

Industrial organization

Econ 3601 and 5631 INDUSTRIAL ORGANIZATION AND ANTI-TRUST POLICY. 4 degree credits. **Not offered 1984-85.**

Economic aspects of anti-trust and related policies. Relations between market structure and economic efficiency and welfare. Economic origins of monopoly and other restraints on competition. Purposes and effects of anti-trust and related legislation. (Prereq 1001 and 1002 or # for 3601 [not open to economics majors]; 3101, 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)

Money and banking

Econ 5721 MONEY AND BANKING. 4 degree credits, \$3701, 5701, \$154. **(IS)**

Historical development, present pattern, and economic role of financial institutions,
(continued next page)

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with main emphasis on commercial banks, the money supply, and the Federal Reserve System. (Prereq 3101, 3102 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Sem Sec 1 **Th**—8:05-9:45, BlegH 240, Smith

Econ 3701 and 5701 MONEY, BANKING, AND MONETARY POLICY. 4 degree credits, \$5721. **To be offered 1985-86. (IS)**

Money creation; determinants and control of the money supply. Effects of various monetary transactions; elementary monetary theory. Economic role of banks, bank regulation. Tight and easy money; Federal Reserve policy. (Prereq 1001, 1002. **Not open to Econ majors**, who should take 5721, which is also offered alternate years. The courses meet concurrently but only one may be taken for credit. Qualified students may register for graduate credit for 5701 at the University of Minnesota)

Public finance

Econ 3801 and 5821 ELEMENTS OF PUBLIC FINANCE. 4 degree credits, \$154.

Government spending and taxation—federal, state and local. Principles of taxation, the government budget, fiscal policies and the public debt. Economic impacts of various policies. (Prereq 1001 and 1002 or # for 3801 [not open to economics majors]; 3101, 3102 or # for 5821. The courses meet concurrently but only one can be taken for credit. Qualified students may register for graduate credit for 5821 at the University of Minnesota)

Fall Sem Sec 1 **W**—6:10-7:50, BlegH 120, Waldo

Education

Persons interested in admission to an Education program should discuss plans with an Extension pre-education counselor (373-3905). Students close to or ready to apply to the College of Education may be referred to the College of Education Student Affairs Office, 1425 University Ave. S. E., Minneapolis 55455 (373-2268), for further information, or directly to the Admissions Office (376-1382), for application. Most professional education courses must be taken in day school, when schools are in session for observation. However, all programs in the College of Education emphasize the preparation of the teacher in liberal education and in the teaching subjects. Many evening offerings listed in this bulletin may be taken by prospective teachers for later use toward degree programs in the College of Education.

Teachers-in-Service: Many courses in academic fields are available for teachers through evening Extension Classes registration. In addition to the professional education courses available through evening Extension Classes there are extensive offerings in the late afternoon and Saturday morning hours as part of the day school program of the College of Education. Secure class schedules at the College of Education Student Affairs Office, 1425 University Ave. S. E., University of Minnesota, Minneapolis, Minnesota 55455 (373-2268).

Day School Classes

How to register in College of Education 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 the Education Student Affairs Office, 1425 University Avenue S.E. (2) Secure approval from any adviser in the area in which you are taking courses (elementary, secondary, etc.) or from a Student Progress Subcouncil representative in the Education Student Affairs Office. (3) Return all

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forms to the Education Student Affairs Office for College of Education approval. (4) Secure fee statement at the Registration Center, 202 Fraser Hall, and pay fees.

Master of Education (M.Ed.) Degree Students: Follow the same procedure as adult special students, but secure approval from your assigned adviser.

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 (373-5542) for information about admission procedures.

For further information, contact the Education Student Affairs Office, 373-2268.

Renewal of Teaching licensure: Former teachers and those wishing to renew licenses should check with the State Department of Education (296-2046) concerning their individual requirements. (See also EPsy 5135 (formerly PsyF 5305) WORKSHOP IN HUMAN RELATIONS)

Please see the following listings for all College of Education course offerings:

AgEd, Agricultural Education; see Vocational and Technical Education (Department of Vocational and Technical Education)

ArEd, Art Education (Department of Curriculum and Instruction)

BME, Business and Marketing Education; see Vocational and Technical Education (Department of Vocational and Technical Education)

CPsy, Child Psychology (Institute of Child Development)

CISy, Curriculum and Instructional Systems (Department of Curriculum and Instruction)

Dnce, Dance (School of Physical Education, Recreation, and School Health Education)

EdAd, Educational 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, psychology in the schools training program, and special education)

Educ, Adult and Teacher Education (Department of Curriculum and Instruction)

Elem, Elementary Education (Department of Curriculum and Instruction)

HEEd, Home Economics Education; see Vocational and Technical Education (Department of Vocational and Technical Education)

HiEd, Higher Education (Department of Educational Policy and Administration)

Hlth, School Health Education (School of Physical Education, Recreation, and School Health Education)

Ind, Industrial Education; see Vocational and Technical Education (Department of Vocational and Technical Education)

MthE, Mathematics Education (Department of Curriculum and Instruction)

MuEd, Music Education (School of Music)

PE, Physical Education (School of Physical Education, Recreation, and School Health Education)

Rec, Recreation, Park, and Leisure Studies (School of Physical Education, Recreation, and School Health Education)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

SeEd, *Secondary Education* (Department of Curriculum and Instruction; includes courses in specific academic fields)

SPFE, *Social and Philosophical Foundations of Education* (Department of Educational Policy and Administration)

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)

Educational Administration (EdAd)

College of Education

(Department of Educational Policy and Administration)

Textbooks for most EdAd courses are available at the Minnesota Book Center in Williamson Hall (373-3688). Joint Day/Extension courses are listed only under "Day School" in the bookstore.

G.F. Alkire, Associate Professor

W.M. Ammentorp, Professor

S.M. Clark, Professor

V.L. Hendrix, Professor

C.P. Hooker, Professor

T.L. Mazzoni, Associate Professor

D.A. Morgan, Associate Professor

V.D. Mueller, Professor

N.C. Nickerson, Professor

S.H. Popper, Professor

C.H. Sederberg, Professor

R.F. Weatherman, Professor

●EdAd 5101 PUBLIC SCHOOL ADMINISTRATION. 3 degree credits, \$141.75.

Organization, administration, and general support of public schools in state and local school districts. **Not open to majors in EdAd. Must be taken A-N.** (Prereq sr, 9 cr in education. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **T**—4:15-6, ChDev 105, Mueller, Morgan

Winter Qtr Sec 2 **M**—4:15-6, PeikH 25, Mueller, Morgan

●EdAd 5103 SUPERVISION AND ADMINISTRATION OF SPECIAL EDUCATION. 3 degree credits, \$EPsy 5660 or PsyS 5160, \$141.75.

Procedures in establishing and improving educational programs for exceptional children. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with EPsy 5660. A joint Day/Extension class)

Fall Qtr Sec 1 **M**—6:30-8:30, PeikH 48, Weatherman

●EdAd 5120 PRACTICUM: POSTSECONDARY ADMINISTRATION. 3-6 degree credits (maximum 6 cr), \$47.25 per credit.

Intensive group and individual examination of current and pertinent administrative problems in post-secondary but nonbaccalaureate institutions. **Must be taken A-N.** Depending on the number of credits taken, time in addition to the regularly scheduled course time may be individually arranged with the instructor. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **Th**—6:30-8:30 and Arr, PeikH 25, Morgan

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

EdAd 5127 WORKSHOP: POLICY DEVELOPMENT FOR SCHOOL MANAGERS. 3 degree credits, \$141.75.

Elements of feedback control applied to policy development and implementation in education; development of policies for instructional management, personnel administration, and fiscal control; implementation plans and procedures for analysis of policy impact. **Must be taken A-N.** (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, PeikH 355, Ammentorp

EdAd 5128 WORKSHOP: EDUCATIONAL ADMINISTRATION. 1-6 degree credits, 2 degree credits (sec 1,3), \$94.50; 3 degree credits (sec 2,4), \$141.75.

Laboratory approach provides opportunities for experienced administrators to concentrate their study on common administrative and supervisory problems. *Focus sec 1,3: State Politics of School Reform* (2 credits). *Focus sec 2: Issues Confronting Secondary School Principals* (3 credits). *Focus sec 4: Supervisory Techniques for School Building Administration* (3 credits). **May be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **T**—6:30-8:30, PeikH 31, Mazzoni

Sec 2 **Sa**—8 a.m.-10, PeikH 315, Nickerson

Spring Qtr Sec 3 **T**—6:30-8:30, PeikH 315, Mazzoni

Sec 4 **T**—6:30-8:30, PeikH 225, Nickerson

EdAd 5167 THE AMERICAN MIDDLE SCHOOL. 3 degree credits, \$141.75.

Sources of the movement; purposes, functions, and limitations; fundamental problems, types, and curricular implications of reorganization. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **M**—4:15-6, Pth 111, Popper

EdAd 5180 SEMINAR: ADMINISTRATION OF SPECIAL EDUCATION. 3 degree credits, \$PsyS 8560, \$EPsy 8760, \$141.75.

Problems of administration and organization of special education programs. **Must be taken A-N.** (Prereq 5103 or EPsy 5660 or PsyS 5160 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **M**—4:15-6, PeikH 155, Weatherman

EdAd 5181 SEMINAR: ADMINISTRATION OF SPECIAL EDUCATION. 3 degree credits, \$PsyS 8561, \$EPsy 8761, \$141.75.

Problems of administration and organization of special education programs. **Must be taken A-N.** (Prereq 5103 or EPsy 5660 or PsyS 5160 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **M**—6:30-8:30, PeikH 225, Weatherman

EdAd 5200 DESIGN AND MANAGEMENT OF EDUCATION SERVICES. 3 degree credits, \$141.75.

Educational services offered by schools, hospitals, industries, government agencies; contemporary technology, roles, authority systems, communication networks; resource-policy relationships, evaluation and management of activities of clients and

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

staff members. **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 T—4:15-6, EdHAnnex 54, Ammentorp

Spring Qtr Sec 2 T—4:15-6, EdHAnnex 54, Ammentorp

⊙EdAd 5201 FORMAL ORGANIZATIONS IN EDUCATION. 3 degree credits, \$8201, \$141.75.

Must be taken A-N. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 W—4:15-6, PeikH 37, Popper

★⊙EdAd 5202 POLITICS OF EDUCATION. 3 degree credits, \$EdAd 8202, \$SPFE 5202, \$SPFE 8202, \$141.75.

Social science findings, concepts, and methods used to consider the political context of educational administration; emphasis on public school policymaking by local and state governments; role of administrators. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with SPFE 5202. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr Sec 1 T—4:15-6, ChDev 218, Mazzoni

Winter Qtr Sec 2 W—4:15-6, PtH 214, Mazzoni

⊙EdAd 5210 FINANCING ELEMENTARY AND SECONDARY SCHOOLS. 3 degree credits, \$8210, \$141.75.

Must be taken A-N. (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, ChDev 105, Mueller

⊙EdAd 5214 SCHOOL MANAGEMENT INFORMATION SYSTEMS. 3 degree credits, \$8214, \$141.75.

Must be taken A-N. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 M—6:30-8:30, PeikH 355, Sederberg, Hendrix

⊙EdAd 5224 LEGAL IMPLICATIONS OF ACTS BY SCHOOL BOARDS, ADMINISTRATORS, AND TEACHERS. 3 degree credits, \$8224, \$141.75.

Must be taken A-N. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 W—6:30-8:30, BlegH 260, Hooker

Spring Qtr Sec 2 W—4:15-6, BlegH 110, Hooker

⊙EdAd 5226 EDUCATIONAL FACILITIES PLANNING. 3 degree credits, \$8226, \$141.75.

Must be taken A-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—6:30-8:30, PeikH 225, Alkire

⊙EdAd 5227 PUBLIC SCHOOL PERSONNEL PROGRAMS. 3 degree credits, \$8227, \$141.75.

Must be taken A-N. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 W—4:15-6, PtH 111, Alkire

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

●EdAd 5230 **PUBLIC RELATIONS FOR SCHOOL ORGANIZATIONS.** 3 degree credits, \$8230, \$141.75.

Must be taken A-N. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **Th**—4:15-6, PeikH 33, Popper

●EdAd 5250 **AMERICAN HIGHER EDUCATION.** 4 degree credits, \$Educ 5250, \$HiEd 5250, \$189.

American higher and postsecondary educational systems and institutions in historical and contemporary perspective; special emphasis on the societal and political demands on the higher education system and consequent changes in its various forms and functions. **May be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HiEd 5250. A joint Day/Extension class)

Fall Qtr Sec 1 **W**—3:15-5, BuH 240, Clark

●EdAd 5274 **TWO-YEAR POSTSECONDARY INSTITUTIONS.** 3 degree credits, \$VoEd 5274, \$141.75.

Present status, development, functions, organization, curriculum, and trends in postsecondary but nonbaccalaureate institutions. **Must be taken A-N.** (No prereq. 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, PeikH 225, Morgan

●EdAd 5275 **TWO-YEAR COLLEGE ADMINISTRATION.** 3 degree credits, \$8275, \$141.75.

Must be taken A-N. (Prereq 5274 or VoEd 5274 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **Th**—6:30-8:30, PeikH 225, Morgan

●EdAd 5292 **THE LAW AND POSTSECONDARY EDUCATIONAL INSTITUTIONS.** 3 degree credits, \$HiEd 5292, \$141.75.

Analysis of court opinions and federal regulations affecting postsecondary educational institutions. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HiEd 5292. A joint Day/Extension class)

Winter Qtr Sec 1 **Th**—4:15-6, BlegH 330, Hooker

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 courses see page 164 or call 373-2268.

Educational Psychology (EPsy)

College of Education

(Courses listed in this section were formerly listed under the designators PsyS and PsyF, and prior to fall quarter 1979, under designators CSPP, SchP, SpEd. Students should consult the

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

department if they are concerned that they have taken course work with any of the above designators which has a title similar to those shown below)

Textbooks for most EPsy courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

Alan Anderson, Associate Professor
Douglas Anderson, Associate Professor
Bruce Balow, Professor
Mary Anne Bunda, Visiting Professor
Mark Davison, Professor
Stanley Deno, Professor
V. Lois Erickson, Associate Professor
L. Sunny Hansen, Professor
Thomas Hummel, Professor
David Johnson, Professor
E. Gary Joselyn, Associate Professor
Theodore Kellogg, Professor
Marie Knowlton, Assistant Professor
Geoffrey, Maruyama, Associate Professor
Jack Merwin, Professor
Chester Oden, Associate Professor

James Rest, Professor
Maynard Reynolds, Professor
Susan Rose, Assistant Professor
John Rynders, Professor
S. Jay Samuels, Professor
Warren Shaffer, Associate Professor
Martin Snoke, Professor
John Stecklein, Professor
G. Alan Stull, Professor
W. Wesley Tennyson, Professor
James Terwilliger, Professor
James Turnure, Professor
Richard Weatherman, Professor
Frank Wood, Professor
James Ysseldyke, Professor

OEpsy 3606 (formerly PsyS 3106) EXCEPTIONAL STUDENTS IN REGULAR CLASSES. 2 degree credits, \$5606, PsyS 3106, PsyS 5106, \$94.50.

Policies and procedures for teaching handicapped and gifted students in regular school settings; exposure to special curriculum adaptations; collaborative roles of regular and special education teachers, parents, pupil personnel workers, and other educators. **Must be taken A-N.** (Prereq sec 1, 3, 5 elementary education major; prereq sec 2, 4, 6 secondary education major. Meet concurrently with 5606. A joint Day/Extension class)

Fall Qtr Sec 1 **Th**—4:15-6, WullH 230, Balow

Sec 2 **M**—4:15-6, BuH 120, Knowlton

Winter Qtr Sec 3 **Th**—4:15-6, BuH 120, Deno

Sec 4 **W**—4:15-6, BuH 120, Rynders

Spring Qtr Sec 5 **Th**—4:15-6, BuH 120, Ysseldyke

Sec 6 **M**—4:15-6, BuH 120, Knowlton

★OEpsy 5110 (formerly PsyF 5147) INTELLIGENCE. 3 degree credits, \$PsyF 5147, \$141.75. (IS)

Theories of intelligence and its development; implications for educational practices and psychological research. **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 10 Extension students)

Fall Qtr Sec 1 **W**—6:20-8:30, BuH 120

OEpsy 5112 (formerly PsyF 5152) KNOWING, LEARNING, AND THINKING. 4 degree credits, \$PsyF 5152, \$189.

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-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **M**—5:30-8, BuH 120, Samuels

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**OEpsy 5114 (formerly PsyF 5182) PSYCHOLOGY OF STUDENT LEARNING.** 3 degree credits, \$PsyF 5182, \$141.75.

Survey of psychological methods and principles; models of the learner; topics in development, creativity, intelligence, and motivation, complications for teaching and curriculum design in preschool, elementary, and secondary education; professional training with children and adolescents as clients. **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 15 Extension students)

Fall Qtr Sec 1 **T**—5:30-7:30, BuH 120

Spring Qtr Sec 2 **W**—5:30-7:30, BuH 123, Turnure

★**OEpsy 5115 (formerly PsyF 5183) ADULT LEARNING AND EDUCATIONAL PRACTICE.** 4 degree credits, \$PsyF 5183, \$189.

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-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**—5:30-8, BuH 123

Spring Qtr Sec 2 **T**—5:30-8, BuH 123

OEpsy 5116 (formerly PsyF 5149) BEHAVIOR ANALYSIS IN EDUCATION. 4 degree credits, \$PsyF 5149, \$189.

Practical applications of reinforcement theory, behavior analysis, precision teaching, programmed instruction. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **Th**—4-7, BuH 120, Deno

★**OEpsy 5117 (formerly PsyF 5570) PROBLEM ANALYSIS AND DECISION MAKING.** 4 degree credits, \$PsyF 5570, \$189.

Literature from decision research contrasted with literature in problem solving from cognitive psychology and the psychology of information processing; improvement in decision making through training, allocation of work, and decision aids. **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 15 Extension students)

Spring Qtr Sec 1 **Th**—5:30-8, ElTH N647

★**OEpsy 5130 (formerly PsyF 5162) PERSONALITY AND SOCIAL DEVELOPMENT.** 3 degree credits, \$PsyF 5162, \$141.75.

Major concepts and research findings in adjustment and development with special emphasis on educational implications. **Must be taken A-N.** (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)

Winter Qtr Sec 1 **T**—4:30-7, BuH 120, Rest

Spring Qtr Sec 2 **W**—4:30-7, ChDev 218, Erickson

OEpsy 5135 (formerly PsyF 5305) WORKSHOP IN HUMAN RELATIONS. 6 degree credits, \$PsyF 5305, \$283.50.

An experientially based course including simulation activities, curriculum writing, and supervised practice in basic human relations skills emphasizing individual, **(continued next page)**

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

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**—4:30-9:30, SciCB 125, Oden, Maruyama

Spring Qtr Sec 2 **M**—4:30-9:30, SciCB 325, Oden, Maruyama

★**OEpsy 5150 (formerly PsyF 5170) SOCIAL PSYCHOLOGY OF EDUCATION.** 4 degree credits, \$PsyF 5170, \$189.

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-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 **T**—4:15-7, WullH 230, D Johnson

★**OEpsy 5152 (formerly PsyF 5173) ISSUES IN SCHOOL DESEGREGATION.** 4 degree credits, \$PsyF 5173, \$189.

Policy, methods, theory, research; emphasis on outcomes for children. **Must be taken A-N.** (Prereq survey course in social psychology 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 **Th**—6-9, BuH 123, Maruyama

OEpsy 5220 (formerly PsyF 5120) EDUCATIONAL MEASUREMENT IN THE CLASSROOM. 4 degree credits, \$PsyF 5120, \$189.

Principles and methods for construction, evaluation, and improvement of classroom measures; techniques for describing results statistically; use of measurement in evaluating instruction and student performance; assignment of grades. **May 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 **TTh**—4:15-6, PtH 216

Winter Qtr Sec 2 **MW**—4:15-6, Arch 60, Joselyn

Spring Qtr Sec 3 **TTh**—4:15-6, ChDev 218, Kellogg

OEpsy 5221 (formerly PsyF 5121) BASIC PRINCIPLES OF MEASUREMENT. 3 degree credits, \$PsyF 5121, \$141.75.

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 5260 or 8260 or PsyF 5110 or 8110. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **MW**—4:15-6, PtH 102, Davison

OEpsy 5240 (formerly PsyF 5125) PRINCIPLES AND METHODS OF EVALUATION. 3 degree credits, \$PsyF 5125, \$141.75.

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. A joint Day/Extension class)

Winter Qtr Sec 1 **MW**—4:15-5:30, BuH 123, Bunda

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**EPsy 5260 (formerly PsyF 5110) INTRODUCTORY STATISTICAL METHODS.** 4 degree credits, \$PsyF 5110, \$189.

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 45)

- Fall Qtr** Sec 1 **T**—6:20-8:50, Pth 215, Stecklein
 Sec 2 **Th**—6:20-8:50, Pth 215, Davison
 ● Sec 3 **MW**—4:15-6, Elth N647, Hummel (A joint Day/Extension class limited to 10 Extension students)
- Winter Qtr** Sec 4 **W**—6:20-8:50, WullH 230, D Anderson
 ● Sec 5 **TTh**—4:15-6, FolH 209, Stull (A joint Day/Extension class limited to 10 Extension students)
- Spring Qtr** ● Sec 6 **MW**—4:15-6, Pth 215, Merwin (A joint Day/Extension class limited to 10 Extension students)
 Sec 7 **W**—6:20-8:50, BuH 120, Terwilliger

★**●EPsy 5401 (formerly PsyS 5110) COUNSELING PROCEDURES.** 3 degree credits, \$PsyS 5110, \$141.75.

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-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 **M**—4:15-6:45, BuH 125, Shaffer
Winter Qtr Sec 2 **M**—4:15-6:45, BuH 125, Shaffer
Spring Qtr Sec 3 **M**—4:15-6:45, BuH 125, Shaffer

★**●EPsy 5430 (formerly PsyS 5210) FOUNDATIONS OF CAREER DEVELOPMENT.** 3 degree credits, \$PsyS 5210, \$141.75.

Introduction: 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-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 **T**—4:15-6:30, BuH 125, L Hansen

★**●EPsy 5431 (formerly PsyS 5331) CAREER DEVELOPMENT: THEORY AND COUNSELING APPLICATIONS.** 3 degree credits, \$PsyS 5331, \$141.75.

Provides students in counseling and allied fields with background; emphasis on counseling skills; topics include work and other life values, the counseling process, planning and decision making, information and employment trends, sex equity in career options, needs of specific groups. **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 15 Extension students)

- Winter Qtr** Sec 1 **W**—4:15-6:30, BuH 125, W Tennyson

Read about abbreviations, symbols, and maps on page 60.
 Courses and sections in red have limits on enrollment. See page 20.

★OEpsy 5432 (formerly PsyS 5332) **CAREER DEVELOPMENT PROGRAMS AND ORGANIZATIONAL CHANGE.** 3 degree credits, \$PsyS 5332, \$141.75.

Provides knowledge and skills to create and implement career programs for a variety of populations and settings; a life-roles concept of career integrated with a systematic model of program development; the consultation process, organizational intervention, and race, age, and gender issues. **Must be taken A-N.** (Prereq EPsy 5431 or 5430 or equivalent. 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—4:15-6:30, BuH 125, L Hansen

★OEpsy 5433 (formerly PsyS 5310) **DEVELOPMENTAL CAREER COUNSELING OF WOMEN.** 3 degree credits, \$PsyS 5310, \$141.75.

Counseling skills and interventions to facilitate the career development of girls and women at different life stages; the sex role system, female socialization and stereotyping; facts, myths, and trends regarding women's changing roles in a technological society; issues of sexism in strategies and programs. **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 15 Extension students)

Spring Qtr Sec 1 W—4:15-6:30, BuH 125, L Hansen

★OEpsy 5451 (formerly PsyS 5540) **SEMINAR: THE COLLEGE STUDENT.** 3 degree credits, \$PsyS 5440, \$HiEd 5440, \$141.75.

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-N.** (Prereq 6 credits psych or ed psych. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HiEd 5440. A joint Day/Extension class limited to 15 Extension students)

Fall Qtr Sec 1 M—6:15-8:30, BuH 123, Rest

★OEpsy 5461 (formerly PsyS 5505) **CROSS-CULTURAL COUNSELING.** 3 degree credits, \$PsyS 5505, \$141.75.

Effect of cross-cultural and cross-national differences on the counseling process. **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 15 Extension students)

Spring Qtr Sec 1 M—4:15-6:30, BuH 123, Snoko

OEpsy 5600 (formerly PsyS 5100) **CHILDHOOD LANGUAGE DEVELOPMENT: CLASSROOM IMPLICATIONS.** 3 degree credits, \$PsyS 5100, \$141.75.

Recent trends and findings in the study of language acquisition; classroom implications for the education of exceptional children. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 W—5:15-8, ChDev 216, Turnure

OEpsy 5601 (formerly PsyS 5101) **EDUCATION OF EXCEPTIONAL CHILDREN.** 4 degree credits, \$PsyS 5101, \$189.

Introduction to field of special education for classroom teachers and other school personnel. **Must be taken A-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—4:15-8, PtH 214, Reynolds

Spring Qtr Sec 2 T—4:15-8, PtH 214, Reynolds

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

OEpsy 5604 (formerly PsyS 5104) SOCIAL AND VOCATIONAL DEVELOPMENT OF HANDICAPPED STUDENTS. 4 degree credits, \$PsyS 5104, \$189.

Organization and designing of training programs to promote independent living, vocational and community adjustment of handicapped persons; curriculum materials and methods at adolescent and adult levels. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **W**—4:15-8, PtH 214, W Tennyson

OEpsy 5605 (formerly PsyS 5105) LAW AND THE HANDICAPPED: IMPLICATIONS FOR EDUCATION. 2-4 degree credits, \$PsyS 5105, \$47.25 per credit.

Analysis of recent litigation and legislation; emphasis on implementation of right to education, right to treatment, labeling, due process, and related issues. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **Th**—4:15-7, PtH 214, Balow

OEpsy 5606 (formerly PsyS 5106) EXCEPTIONAL STUDENTS IN REGULAR CLASSES. 2 degree credits, \$3606, PsyS 3106, PsyS 5106, \$94.50.

See course description for EPsy 3606. **Must be taken A-N.** (Prereq sec 1, 3, 5 elementary education major; prereq sec 2, 4, 6 secondary education major. Meets concurrently with 3606. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **Th**—4:15-6, WullH 230, Balow
Sec 2 **M**—4:15-6, BuH 120, Knowlton

Winter Qtr Sec 3 **Th**—4:15-6, BuH 120, Deno
Sec 4 **W**—4:15-6, BuH 120, Rynders

Spring Qtr Sec 5 **Th**—4:15-6, BuH 120, Ysseldyke
Sec 6 **M**—4:15-6, BuH 120, Knowlton

OEpsy 5607 (formerly PsyS 5107) MAINSTREAMING: ISSUES IN INDIVIDUALIZING INSTRUCTION. 3-5 degree credits, \$PsyS 5107, \$47.25 per credit.

Mandate for, implications of, and problems in the implementation of systems models and practical classroom practices which facilitate the education of the handicapped within regular classroom settings. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **M**—4:15-7, Irondale HS, New Brighton, Reynolds

OEpsy 5608 (formerly PsyS 5108) PARENT AND PROFESSIONAL PLANNING FOR HANDICAPPED STUDENTS. 3 degree credits, \$PsyS 5108, \$141.75.

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-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **Th**—4:15-7, PeikH 315, Wood

Spring Qtr Sec 2 **M**—4:15-7, PtH 214, Reynolds

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

OEpsy 5612 (formerly PsyS 5112) EDUCATION OF LEARNING-DISABLED CHILDREN. 3 degree credits, \$PsyS 5112, \$141.75.

Analysis of considerations in design and conduct of services for learning-disabled children; approaches to education of such children. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 T—4:15-7, Richfield HS, Balow

OEpsy 5613 (formerly PsyS 5113) DIAGNOSIS AND REMEDIATION OF LEARNING DISABILITY I. 4 degree credits, \$PsyS 5113, \$189.

Survey, demonstration, and evaluation of special techniques for diagnosis and remediation of severe learning deficits appearing in reading and written language (including dyslexia) and basic quantitative concepts. **Must be taken A-N.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 T—4:15-8, BuH 123, Wood

OEpsy 5614 (formerly PsyS 5114) DIAGNOSIS AND REMEDIATION OF LEARNING DISABILITY II. 4 degree credits, \$PsyS 5114, \$189.

Survey, demonstration, and evaluation of special techniques for amelioration of deficits in perceptive, integrative, and expressive processes. **Must be taken A-N.** (Prereq 5613, \$5701 or PsyS 5113, 5601, and #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 T—4:15-8, PtH 214, Deno

OEpsy 5620 (formerly PsyS 5120) INTRODUCTION TO MENTAL RETARDATION. 4 degree credits, \$CPsy 5315, \$PsyS 5120, \$189.

Issues which relate to educational practices; community planning; educational philosophy, administration and organization, and programming. **Must be taken A-N.** (Prereq 5601 or PsyS 5101 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with CPsy 5315. A joint Day/Extension class)

Spring Qtr Sec 1 T—4:15-8, ChDev 216, Turnure

OEpsy 5625 (formerly PsyS 5125) EDUCATION OF HANDICAPPED INFANTS AND PRESCHOOL CHILDREN. 4 degree credits, \$PsyS 5125, \$189.

Issues, problems, and implications and practical application in designing strong programs for young children with all types of handicapping conditions. **Must be taken A-N.** (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 M—4:15-8, PtH 215, Rynders

OEpsy 5626 (formerly PsyS 5126) METHODS AND MATERIALS FOR TEACHING CHILDREN WITH SEVERE MULTIHANDICAPPING CONDITIONS. 4 degree credits, \$PsyS 5126, \$189.

Core curricula for children who manifest combinations of severe mental, physical, and sensory impairments; strategies for using adaptive equipment and managing classroom space. **Must be taken A-N.** (Prereq 5601 or 5620 or PsyS 5101 or 5120 or CPsy 5315. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 Th—4:15-8, PtH 215

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

●EPsy 5635 (formerly PsyS 5135) EDUCATION OF STUDENTS WITH PHYSICAL DISABILITIES. 3 degree credits, \$PsyS 5135, \$141.75.

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-N.** (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 **M**—4:15-7, WullH 130

●EPsy 5641 (formerly PsyS 5141) METHODS OF TEACHING SCHOOL SUBJECTS TO THE HEARING IMPAIRED. 3 degree credits, \$PsyS 5141, \$141.75.

Adaptation of materials and teaching methods for hearing-impaired children in reading, mathematics, social studies, and science. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **M**—4:15-7, WullH 130, Rose

●EPsy 5644 (formerly PsyS 5144) TEACHING LANGUAGE TO THE HEARING IMPAIRED II. 3 degree credits, \$PsyS 5144, \$141.75.

Devising language curricula and teaching techniques in primary, intermediate, and advanced programs for the deaf; comparative study of the language development of the deaf and hearing. **Must be taken A-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**—4:15-7, PtH 102

●EPsy 5645 (formerly PsyS 5145) TEACHING SPEECH TO THE HEARING IMPAIRED I. 3 degree credits, \$PsyS 5145, \$141.75.

Survey of speech methodologies in teaching auditorily impaired children; major emphasis on techniques for teaching specific sounds, articulation, voice, and sentence rhythm, stressing intelligibility of speech. Demonstration and practice with individuals and groups of auditorily impaired children. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **M**—4:15-7, PtH 214

●EPsy 5647 (formerly PsyS 5147) AURAL REHABILITATION OF HEARING-IMPAIRED CHILDREN. 3 degree credits, \$PsyS 5147, \$141.75.

Recent trends in training hearing-impaired (deaf and hard-of-hearing) children in utilization of residual hearing; consideration of present alternative approaches to auditory training and aural rehabilitation. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **M**—4:15-7, JonesH 4, Rose

Spring Qtr Sec 2 **W**—4:15-7, WullH 130, Rose

●EPsy 5648 (formerly PsyS 5148) MODES OF COMMUNICATION FOR THE HANDICAPPED. 3 degree credits, \$PsyS 5148, \$141.75.

Theoretical and applied study of selection and application of alternative communication modalities; assessment and development of modes including gestures, speech reading, cued speech, sign systems, form boards, and Bliss-symbolics. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **W**—4:15-7, WullH 130, Rose

Winter Qtr Sec 2 **W**—4:15-7, WullH 130, Rose

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

OEpsy 5651 (formerly PsyS 5151) MANAGING PROBLEM BEHAVIOR IN THE CLASSROOM. 3 degree credits, \$PsyS 5151, \$141.75.

Typical patterns of problem behavior in classroom settings; relationships to teacher mental health; simulation of methods for prevention and management. **Must be taken A-N.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **M**—4:15-7, Irondale HS, New Brighton, Wood

OEpsy 5660 (formerly PsyS 5160) SUPERVISION AND ADMINISTRATION OF SPECIAL EDUCATION. 3 degree credits, \$PsyS 5160, \$EdAd 5103, \$141.75.

Procedures in establishing and improving educational programs for exceptional children. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with EdAd 5103. A joint Day/Extension class)

Fall Qtr Sec 1 **M**—6:30-8:30, PeikH 48, Weatherman

OEpsy 5672 (formerly PsyS 5172) BRAILLE II. 3 degree credits, \$PsyS 5172, \$141.75.

Development of classroom material involving literary Braille code; mastery of Nemeth code of mathematics; opportunity for mastery of music code; consideration of newer approaches in setting up text and reference materials. **Must be taken A-N.** (Prereq 5671 or PsyS 5171. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **W**—4:15-7, JonesH 4, Knowlton

OEpsy 5673 (formerly PsyS 5173) METHODS OF TEACHING VISUALLY HANDICAPPED CHILDREN. 4 degree credits, \$PsyS 5173, \$189.

Principles of preparation, selection, and effective use of instructional materials; adaptation of school environment; utilization of family, school, and community resources. **Must be taken A-N.** (Prereq 5670 or PsyS 5170. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **T**—4:15-8, WullH 130, Knowlton

OEpsy 5690 (formerly PsyS 5190) EDUCATION OF THE GIFTED AND TALENTED. 3 degree credits, \$PsyS 5190, \$141.75.

Origin and development of terms such as giftedness, creativity, genius, talent, and intelligence; implications for educational practice; current issues and trends. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **W**—4:15-7, Pth 102

OEpsy 5700 (formerly PsyS 5200) ASSESSMENT AND DECISION MAKING IN SPECIAL EDUCATION. 4 degree credits, \$PsyS 5200, \$189.

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-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **W**—4:15-8, WullH 230, Ysseldyke

Spring Qtr Sec 2 **Th**—4:15-8, WullH 230, Deno

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

●**EPsy 5801 WORKSHOP IN SCHOOL PSYCHOLOGY.** 3-6 cr (max 6 cr). This offering 3 degree credits, \$141.75.

Concepts and techniques of psychological and developmental education applied to needs of specific groups of educators emphasizing classroom applications; improving effectiveness of educational programming for conceptual, moral, or ego development; positive self identity; or interpersonal and affective growth. *Emphasis Sec 1: From Ego Psychology to Higher Consciousness Research—The Farther Reaches of Human Nature.* The realm of the human psyche and its corresponding states of consciousness, identity, and experience extend far beyond what we have thought of as our limits. In this workshop, a sweeping view of the themes of Jung, Bergson, Maslow, William James lead to a focus on the shift from ego psychology to higher consciousness research. A developmental model of consciousness is set forward with a view to integrating Western and Eastern psychology. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 T—4-6:30, EltH N508, Erickson

EPsy 5849 (formerly PsyS 5549) ASSESSMENT OF THE PRESCHOOL CHILD. 3 degree credits, \$PsyS 5549, \$141.75.

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)

Spring Spec Term Sec 1 Sa—8:30 a.m.-4:30, Apr. 13, 27, May 11, June 1
(4 meetings), EltH N647
No late fee through Apr. 6

Electrical Engineering (EE)

Institute of Technology

Textbooks for most EE courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

Your attention is called to the Professional Development Recognition Program in Engineering and Science, page 187.

K.S.P. Kumar, Professor of Electrical Engineering

Dave Lo, Sperry Corporation

M.A. Mitchell, Honeywell

Ed Nowak, Sperry Corporation

Robert Oswald, Sperry Corporation

Charles Tolman, Sperry Corporation

F.M. Waltz, 3M Company

A MAJOR IN ELECTRICAL ENGINEERING CAN BE COMPLETED IN THE EVENING.

Through registration in Extension Classes students may earn a bachelor's degree in Electrical Engineering. This degree is granted by the Institute of Technology. Degree candidates must be admitted to the Institute before the beginning of the third-year sequences.

The Department of Electrical Engineering does not distinguish between its students in day class and evening class sections. All students in a given course take the same examinations and are assigned course grades from a common curve. Grade reports are signed by department administrators and copies are sent to the Office of the I.T. Assistant Dean. The

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

same academic standards apply—graduation with honors, dean's list, probation actions, and so forth.

Students interested in the degree should see the Degrees and Certificates section of this Bulletin.

Your attention is called to the Undergraduate Development Certificate in Electrical Engineering—90 credits and 135 credits. See the Degrees and Certificates section of this Bulletin.

★EE 1400 CIRCUITS LABORATORY. 1 degree credit, \$37.

Laboratory to accompany 3009 and 3010. (Prereq IT student, 3009 or ¶3009. Limited to 28)

Spring Qtr Sec 1 **M**—8:10-9:55, ElectE Labs

Sec 2 **W**—8:10-9:55, ElectE Labs

★EE 3009 LINEAR CIRCUITS I. 4 degree credits, \$186.

Physical principles underlying the modeling of circuit elements. Two- and three-terminal resistive elements. Kirchoff's laws. Simple resistive circuits. Linearity in circuits. Storage elements. First- and second-order circuits. (Prereq IT major, at least C grades in Math 3221, Phys 1281 or ¶Math 3221 or ¶Phys 1281. Limited to 56)

Spring Qtr Sec 1 **MW**—Lect, 6:10-8:10, ExpE 193

★EE 3010 LINEAR CIRCUITS II. 4 degree credits, \$186.

Modeling of lumped parameter networks. Sinusoidal steady-state analysis. Two-port networks. (Prereq IT student, at least C grades in 3009, Math 3221, Phys 1291 or ¶Phys 1291. Limited to 75)

Fall Qtr Sec 1 **T**—6:10-8:25, MechE 102, 202

Th—6:10-7:30, MechE 102, 202

★EE 3011 SIGNAL ANALYSIS. 4 degree credits, \$186.

Fourier Methods of analysis. Laplace transforms and applications. Frequency and time-domain responses. (Prereq upper division EE major; 3010. Limited to 75)

Winter Qtr Sec 1 **T**—6:10-8:25, MechE 102, 202

Th—6:10-7:30, MechE 102, 202

★EE 3012 SYSTEM DESIGN. 4 degree credits, \$186.

Continuous, discrete-time systems. Feedback: stability, applications. (Prereq upper division EE major, 3011. Limited to 75)

Spring Qtr Sec 1 **T**—6:10-8:25, MechE 102, 202

Th—6:10-7:30, MechE 102, 202

★EE 3060 SEMICONDUCTOR DEVICES. 4 degree credits, \$186.

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. Limited to 75)

Fall Qtr Sec 1 **M**—6:10-8:25, MechE 108

W—6:10-7:30, MechE 108

★EE 3061 ANALOG ELECTRONICS. 4 degree credits, \$186.

Small signal models for the BJT and FET. Elementary amplifiers. Differential and operational amplifiers; applications. (Prereq upper division EE or CSci or ME major, 3010, 3060. Limited to 75)

Winter Qtr Sec 1 **M**—6:10-8:25, MechE 102, 202

W—6:10-7:30, MechE 102, 202

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★EE 3062 **DIGITAL ELECTRONICS.** 4 degree credits, \$186.

Implementation of digital circuits with bipolar and field-effect transistors; application to inverters, gates, flip-flops, logic arrays, and storage elements. (Prereq upper division EE or CSci or ME major, 3061, 3351 or ¶3351. Limited to 75)

Spring Qtr Sec 1 **M**—6:10-8:25, MechE 102, 202

W—6:10-7:30, MechE 102, 202

★EE 3110 **ELECTRIC AND MAGNETIC FIELDS.** 4 degree credits, \$186.

Field properties of electricity and magnetism. Interaction with dielectric and magnetic materials. (Prereq upper division EE or ME major, at least C grades in Math 3231, Phys 1291. Limited to 75)

Winter Qtr Sec 1 **M**—6:10-8:25, Arch 40

W—6:10-7:30, Arch 40

★EE 3111 **ELECTROMAGNETIC WAVES.** 4 degree credits, \$186.

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 **M**—6:10-8:25, MechE 18

W—6:10-7:30, MechE 18

★EE 3351 **INTRODUCTION TO LOGIC DESIGN AND MICROPROCESSORS.** 4 degree credits, \$186. (IS)

Boolean algebra and logic gates. Combinational logic and design examples. Sequential logic and design of sequential logic systems. Basic computer organization and assembly language programming. Instruction types and addressing modes. Subroutines. Integral laboratory. (Prereq sophomore standing in I.T. Sec 1 and 2 lectures meet concurrently. Limited to 32)

Winter Qtr Sec 1 **M**—Lect, 6:10-8:40, CivMinE 212

T—Lab, 6:10-8:10, ElectE Labs

Sec 2 **M**—Lect, 6:10-8:40, CivMinE 212

W—Lab, 6:10-8:10, ElectE Labs

★EE 3352 **MICROPROCESSORS.** 4 degree credits, \$186. (IS)

Programmable logic devices, memory devices, and microprocessors. Input/output for a microprocessor and peripheral devices. Interrupt driver input/output. Design of microprocessor-based systems. Integral laboratory. (Prereq IT major, 3351. Sec 1 and 2 lectures meet concurrently. Limited to 16)

Spring Qtr Sec 1 **M**—Lect, 6:10-8:40, ElectE 115

T—Lab, 6:10-8:10, ElectE Labs

Sec 2 **M**—Lect, 6:10-8:40, ElectE Labs

W—Lab, 6:10-8:10, ElectE Labs

★EE 3400-3401-3402 **JUNIOR ELECTRICAL ENGINEERING LABORATORY.** 2 degree credits each quarter, \$93 each quarter.

Experiments in circuits, electronics, and electromagnetic fields. (Prereq IT student, 3010 or ¶3010, 3060 or ¶3060 for 3400...3011 or ¶3011, 3061 or ¶3061 for 3401...3401, 3062 or ¶3062 for 3402. Limited to 28)

Fall Qtr **3400** Sec 1 **T**—6:10-9:10, ElectE Labs

Sec 2 **Th**—6:10-9:10, ElectE Labs

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

- Winter Qtr 3401** Sec 3 **T**—6:10-9:10, ElectE Labs
 Sec 4 **Th**—6:10-9:10, ElectE Labs
Spring Qtr 3402 Sec 5 **T**—6:10-9:10, ElectE Labs
 Sec 6 **Th**—6:10-9:10, ElectE Labs

EE 3476-3477 INDUSTRIAL ASSIGNMENT I, II. 2 degree credits each quarter, \$93 each quarter.

new

Industrial work assignment in engineering intern program. Evaluation based on formal written report accomplished by the student covering the quarter's work assignment. Students interested in graduate credit should see 5478-5479 below. (Prereq registration in Engineering Intern Program with written permission of the chairman of the Intern Program Committee. A joint Day/Extension class)

- Fall Qtr 3476** Sec 1 **Arr**
 3477 Sec 2 **Arr**
Winter Qtr 3476 Sec 3 **Arr**
 3477 Sec 4 **Arr**
Spring Qtr 3476 Sec 5 **Arr**
 3477 Sec 6 **Arr**

EE 5055 INSTRUMENTATION AND CONTROL ELECTRONICS. 4 degree credits, \$186.

new

Internal circuitry of modern integrated circuit operational amplifiers; linear and nonlinear applications of operational amplifiers; power amplifiers; semiconductor controlled rectifiers and their applications; linear voltage regulators; switching regulators. (Prereq IT student or grad IT major, 3012, 3061. May not be taken for graduate credit. Limited to 65)

- Fall Qtr** Sec 1 **T**—6:10-8:40, MechE 302
Th—6:10-7, MechE 302

EE 5202 ANALOG COMMUNICATION. 3 degree credits, \$139.50.

new

Selected topics in analog communication systems; amplitude and frequency modulation. Spectral analysis and effect of noise in modulation systems. Detection. See EE 5240 below for accompanying lab section. (Prereq IT student or grad IT major, 3012, Stat 3091 or #. May not be taken for graduate credit. Limited to 65)

- Winter Qtr** Sec 1 **T**—6:10-8:40, ExpE 193

EE 5240 ANALOG COMMUNICATION LABORATORY. 1 degree credit, \$46.50.

new

Laboratory to accompany 5202. (Prereq 5202 or ¶5202. May not be taken for graduate credit. Limited to 24)

- Winter Qtr** Sec 1 **Th**—6:10-8:40, ElectE Labs

EE 5252 DIGITAL CONTROL SYSTEMS. 3 degree credits, \$139.50.

new

Time- and frequency-domain analysis of discrete-time and digital control systems. Data conversion and interfacing. Digital computers as control system components. Software and hardware considerations in digital control systems design. See EE 5290 below for accompanying lab section. (Prereq IT student or grad IT major, 3352 or ¶3352, and 5002 or ¶5002 or #. May not be taken for graduate credit. Limited to 65)

- Spring Qtr** Sec 1 **T**—6:10-8:40, MechE 302

Read about abbreviations, symbols, and maps on page 60.
 Courses and sections in red have limits on enrollment. See page 20.

★EE 5290 DIGITAL CONTROL SYSTEMS LABORATORY. 1 degree credit, \$46.50.

new

Laboratory to accompany 5290. (Prereq 5252 or ¶5252. May not be taken for graduate credit. Limited to 24)

Spring Qtr Sec 1 Th—6:10-8:40, ElectE Labs

ⓄEE 5478-5479 INDUSTRIAL ASSIGNMENT III, IV. 2 degree credits each quarter, \$93 each quarter.

new

Industrial work assignment in engineering intern program. Evaluation based on formal written report accomplished by the student covering the quarter's work assignment. (Prereq registration in Engineering Intern Program with written permission of the chairman of the Intern Program Committee. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr 5478 Sec 1 Arr

5479 Sec 2 Arr

Winter Qtr 5478 Sec 3 Arr

5479 Sec 4 Arr

Spring Qtr 5478 Sec 5 Arr

5479 Sec 6 Arr

Elementary Education (Elem)

College of Education

(Department of Curriculum and Instruction)

Textbooks for most Elem courses are available at the Minnesota Book Center in Williamson Hall (373-3688). Joint Day/Extension courses are listed only under "Day School" in the bookstore.

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.

See page 24 for information regarding reopenings that may occur prior to the start of the term.

John J. Cogan, Professor

Arthur K. Ellis, Professor

Harlan S. Hansen, Professor

Roger T. Johnson, Professor

Helen L. Jorstad, Associate Professor

Ronald T. Lambert, Professor

John C. Manning, Professor

Dianne L. Monson, Professor

R. Norine Odland, Professor

Robert Schreiner, Professor

Barbara M. Taylor, Associate 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.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★◉Elem 5100 ELEMENTARY SCHOOL CURRICULUM. 3 degree credits, \$141.75.

Selection and organization of subject matter for courses; methods, problems, and finding of research by subjects. **Must be taken A-N.** (Prereq 3101. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Winter Qtr Sec 1 Th—4:15-6, PeikH 46, Lambert

Spring Qtr Sec 2 T—4:15-6, PeikH 165, Lambert

★◉Elem 5107 DIAGNOSIS AND TREATMENT OF LEARNING DIFFICULTIES. 3 degree credits, \$141.75.

Diagnosis of pupil difficulty; development and prevention; tests as aids to teaching; following up a testing program; socio-emotional problems associated with learning difficulties. **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 6 Extension students)

Winter Qtr Sec 1 M—4:15-6, PeikH 40, Schreiner

★◉Elem 5108 SUPERVISION AND IMPROVEMENT OF INSTRUCTION. 3 degree credits, \$141.75.

Functions and duties of a supervisor; techniques; analysis of classroom activities. **Must be taken A-N.** (Prereq 9 cr in education. 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 T—4:15-6, PeikH 325, Lambert

★◉Elem 5140 MICROCOMPUTER USES IN ELEMENTARY CLASSROOMS. 3 degree credits, \$CISy 5206, \$141.75.

Use of microcomputers to enhance instruction; applications in language arts, mathematics, science, social studies; evaluation of available programs. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with CISy 5206. A joint Day/Extension class limited to 6 Extension students)

Fall Qtr Sec 1 T—4:15-7, PeikH 355, Stochl

★◉Elem 5145 CLASSROOM MANAGEMENT. 3 degree credits, \$SeEd 5145, \$141.75.

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. **Must be taken A-N.** (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 6 Extension students)

Fall Qtr Sec 1 T—4:30-7, PeikH 25, H Hansen

★◉Elem 5300 LITERATURE FOR THE ELEMENTARY SCHOOL. 3 degree credits, \$141.75.

Evaluative survey of books for children; research related to children's reading interests; selection of literature. **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 6 Extension students)

Fall Qtr Sec 1 M—4:15-6, BuH 123, Odland

Spring Qtr Sec 2 T—4:15-6, BuH 120, Odland

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

- ★◉Elem 5315 **TEACHING COMPOSITION IN THE ELEMENTARY SCHOOL.** 3 degree credits, \$141.75.

Theory and research dealing with the writing process and application to development of an elementary school writing curriculum. **Must be taken A-N.** (Prereq postbaccalaureate, MEd, or grad student. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Winter Qtr Sec 1 W—4:15-6, ChDev 105, Monson

- ★◉Elem 5316 **TEACHING AND SUPERVISION OF ENGLISH IN THE ELEMENTARY SCHOOL.** 3 degree credits, \$141.75.

Improvement of instruction, study of trends in English education. **Must be taken A-N.** (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 6 Extension students)

Spring Qtr Sec 1 W—4:15-6, PeikH 40, Monson

- ★◉Elem 5319 **TEACHING SECOND LANGUAGES AND CULTURES IN ELEMENTARY SCHOOLS.** 3 degree credits, \$141.75.

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. **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 6 Extension students)

Fall Qtr Sec 1 Sa—9 a.m.-12, PeikH 215, Jorstad

- ★◉Elem 5330 **COMPUTER-ASSISTED INSTRUCTION IN READING AND LANGUAGE ARTS FOR ELEMENTARY SCHOOL STUDENTS.** 3 degree credits, \$141.75.

Developing, evaluating, and using materials to present reading and language arts content to elementary age students; interface of theoretical issues with instructional techniques presented on computers. **Must be taken A-N.** (Prereq educ major or elem or secondary tchg exper or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Spring Qtr Sec 1 M—4:15-6, PeikH 355, Schreiner

- ★◉Elem 5331 **TEACHING AND SUPERVISION OF READING IN THE ELEMENTARY SCHOOL.** 3 degree credits, \$141.75.

Objectives, materials, and teaching procedures; current practices and curricula; class and individual projects; observation of reading techniques and material in the demonstration school. **Must be taken A-N.** (Prereq 9 cr in education. 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 M—4:15-6, PeikH 355, Manning

- ★◉Elem 5334 **READING DIFFICULTIES.** 3 degree credits, \$141.75.

Causes, prevention, and correction; remedial practices useful to the classroom teacher, school counselor, and reading specialist. **Must be taken A-N.** (Prereq 5331 or SeEd 5344. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Winter Qtr Sec 1 T—4:15-6, PeikH 40, Schreiner

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

★**Elem 5335 CLINICAL DIAGNOSIS OF READING DIFFICULTIES.** 3 degree credits, \$141.75.

Relationship to psychological factors and clinical remedial correction. **Must be taken A-N.** (Prereq 5334. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)
Spring Qtr Sec 1 **T**—4:15-6, PeikH 155, Schreiner

★**Elem 5337 BEGINNING READING INSTRUCTION.** 3 degree credits, \$141.75.

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-N.** (Prereq 3331 and #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Winter Qtr Sec 1 **T**—4:15-6, PeikH 155, Manning

★**Elem 5338 TEACHING READING IN THE INTERMEDIATE GRADES.** 3 degree credits, \$141.75.

For teachers and specialists interested in problems of teaching reading beyond the decoding stage; emphasis on comprehension strategies, basic study skills, and reading in the content areas. **Must be taken A-N.** (Prereq 3331 and #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Winter Qtr Sec 1 **W**—4:15-6, PeikH 31, Taylor

★**Elem 5348 WORKSHOP: OUTDOOR SCIENCE EDUCATION.** 3 degree credits, \$141.75.

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. **Must be taken A-N.** (Prereq elementary teaching experience. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Winter Spec Term Sec 1 **F**—6-9, Jan. 25

Sa—8:30 a.m.-4:30, Jan. 26

Su—8:30 a.m.-4:30, Jan. 27

Wood Lake Nature Center, Richfield (66th and Lakeshore Drive), Johnson

F—6-9, Feb. 8

Sa—8:30 a.m.-5, Feb. 9

Su—8:30 a.m.-1, Feb. 10

Long Lake Conservation Center, Aitkin, Minn., Johnson

W—6-9, Mar. 6, Minnesota Science Museum, 10th and Wabasha, StP, R Johnson

No late fee through Jan. 18

★**Elem 5350 ELEMENTARY SCHOOL SCIENCE: MATERIALS AND RESOURCES.** 3 degree credits, \$141.75.

Experiences in the use of educational materials and media common to the teaching of modern elementary school science. **Must be taken A-N.** (Prereq 5349. Qualified)
(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

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 **Th**—4:15-7, PeikH 385, R Johnson

★**Elem 5361 TEACHING SOCIAL STUDIES IN THE ELEMENTARY SCHOOL.** 3 degree credits, \$141.75.

Content and organization of social studies programs; programs of understanding, improving the learning situation, and effective use of materials. **Must be taken A-N.** (Prereq 3101 or equivalent. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Spring Qtr Sec 1 **W**—4:15-6, PeikH 165, Ellis

★**Elem 5376 CURRENT TRENDS IN EARLY CHILDHOOD EDUCATION.** 3 degree credits, \$141.75.

Continuing needs of children in our changing culture; current practices and recent research. **Must be taken A-N.** (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 6 Extension students)

Fall Qtr Sec 1 **M**—4:30-7, PeikH 46, Hansen

★**Elem 5377 EARLY CHILDHOOD EDUCATION: MATERIALS AND RESOURCES.** 3 degree credits, \$141.75.

Experience in the selection and use of commercial and teacher-made educational materials and media common to early childhood education programs. **Must be taken A-N.** (Prereq 3377 or 5376 and teaching experience. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Spring Qtr Sec 1 **T**—4:30-7, PeikH 155, Hansen

A variety of courses and workshops in elementary 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:

Director of Continuing Professional Education, Department of Curriculum and Instruction, University of Minnesota, 125 Peik Hall, 159 Pillsbury Drive S.E., Minneapolis, MN 55455. Telephone: 373-3300.

Employee Benefits Specialist

(See Insurance)

Engineering

PROFESSIONAL DEVELOPMENT RECOGNITION PROGRAM IN ENGINEERING AND SCIENCE (POST-BACCALAUREATE LEVEL)

This is a specialized program to meet the educational needs of the practicing engineer or scientist. Applicants identify their professional development educational objectives

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

for a two-year period. With a Professional Development adviser, they establish a coherent program of study to meet their objectives. Upon completion, they are presented a citation documenting their work. Engineers and scientists may undertake several of these programs throughout their professional life times.

ENGINEERING

Extension Classes and the Institute of Technology offer regular IT classes in several areas of engineering. These are listed under Aerospace Engineering and Mechanics, Civil Engineering, I of T, Electrical Engineering, Industrial Engineering/Operations Research, Metallurgy/Materials Science, 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.).

Further details may be obtained by contacting the Director, Continuing Education in Engineering and Science, 280 Experimental Engineering, 208 Union Street S.E., University of Minnesota, Minneapolis, Minnesota 55455; (612) 373-3132.

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 605. For further information, call Extension Counseling, 373-3905.

Please see the following departmental listings for course offerings:

AEROSPACE ENGINEERING AND MECHANICS
CHEMISTRY
CIVIL ENGINEERING
COMPUTER SCIENCE
ELECTRICAL ENGINEERING
ENGINEERING ENGLISH (ENGLISH)
ENGINEERING GRAPHICS (MECHANICAL ENGINEERING)
GEO-ENGINEERING (CIVIL ENGINEERING)
INDUSTRIAL ENGINEERING/OPERATIONS RESEARCH
INSTITUTE OF TECHNOLOGY
MATHEMATICS
MECHANICAL ENGINEERING
METALLURGY-MATERIALS SCIENCE
PHYSICS

(See also Comp 3031, Technical Writing for Engineering)

Engineering Graphics (EG)

See Mechanical Engineering

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

English (Engl)

College of Liberal Arts

Textbooks for most Engl courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

Your attention is called to the Master of Arts in English. See the Degrees and Certificates section of this Bulletin.

Paulette Alden, Lecturer in English
Chester Anderson, Professor of English
Kent Bales, Professor of English
Michael Dennis Browne, Associate Professor of English
Allan Burns, Associate Professor of English
Thomas S. Clayton, Professor of English
Pierre Delattre, Assistant Professor of English
Genevieve Escure, Associate Professor of English
Philip Furia, Professor of English
Burton W. Galle, Assistant Professor of Pharmacy
Michael Hancher, Professor of English
Gordon Hirsch, Associate Professor of English
J. Dennis Hurrell, Professor of English
Archibald I. Leyasmeyer, Associate Professor of English
Derek Longhurst, Lecturer in English
Andrew MacLeish, Professor of English
Charles Norman, Lecturer in English
Gordon W. O'Brien, Professor of English
William Rosendahl, Professor of English
Martin Roth, Professor of English
Thomas Russell, Lecturer in English
Nancy Stenson, Assistant Professor of Linguistics
Robert Silberman, Assistant Professor of Art History
Robert Solotaroff, Associate Professor of English
Charles Sugnet, Associate Professor of English
Frederick C. Suppe, Assistant Professor of History

A MAJOR IN ENGLISH CAN BE COMPLETED IN THE EVENING.

Interested students should discuss plans with an Extension counselor (373-3905). (See the Degrees and Certificates section of this Bulletin for information on a master's degree in English).

B.A. Major Sequence

Required Preparatory Course—1009: Introduction to the Study of Literature

Major Requirements—Twelve four-credit courses in English or composition (three may be taken S-N), eleven of them at the 3000 and 5000 levels. They must include

- I. One course in each of the following categories:
 1. Shakespeare—3241 or 3242 or 3243
 2. Literature of the Middle Ages or the Renaissance
 3. American or English literature of the 17th or 18th century
 4. American or English literature of the 19th century
 5. Study of a literary genre
 6. Study of a single writer

Read about abbreviations, symbols, and maps on page 60.
 Courses and sections in red have limits on enrollment. See page 20.

7. Literary Criticism

8. English language

and four electives in English or composition.

II. A Senior Paper written in conjunction with English 3960, Junior-Senior Seminar, or English 3931-3932, English Quarter, individual offerings of which may apply also to one of the above categories.

Transfer students majoring in English must write the Senior Paper and take at least three other 3000 and 5000 courses in the department. Courses in each of the categories are listed in the English Major Handbook, which may be obtained in the Undergraduate Studies Office, 204 Lind (376-4653).

Students are encouraged to complete the required courses before choosing the electives, which may be concentrated within one area of study, for example, in a literary period, a genre (such as poetry, drama, or the novel), criticism, language, writing, or American literature. Although we do not require it, we expect that English majors will study twentieth-century literature through a survey or genre course. With careful planning these elective courses can be valuable as preparation for a career or advanced literary study. The Senior Paper ideally should be the culmination of a major's study of English language and literature, helping each student to use previously acquired perspectives and analytical skills. Prospective English majors should consult the undergraduate advisor, 204 Lind, as early as possible.

Typical related studies include English and American history, modern European languages, and classical studies. The department particularly encourages courses in foreign language and literature, including Greek and Latin. The study of foreign literatures is best undertaken in the original languages. English majors, especially those who plan to pursue graduate study, should begin foreign language study as soon as possible.

Minor Requirements—Required preparatory course: 1009. Six 4-credit 3000 or 5000 courses in English or Composition (one may be graded S-N), to include:

One Shakespeare course (3241 or 3242 or 3243)

Two courses in British or American literature before 1850

One course in English language or literary criticism

Two other courses in literature, language, or composition (including creative writing)

A list identifying the courses in each of these categories may be obtained in the Undergraduate Studies Office, 204 Lind Hall.

You need not be majoring in English 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 English. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

Creative writing and editing

★Engl 1101 (formerly Comp 1101) INTRODUCTION TO FICTION WRITING. 4 degree credits, \$Comp 1101, 1113, \$148.

Structured approach for students who have done little writing. Development of
(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

techniques, definite assignments, principles of composition in the art of fiction. (No prereq. Limited to 22)

Fall Qtr Sec 1 M—6:20-8:50, LindH 302, Norman

Sec 2 T—6:20-8:50, LindH 305, Alden

Winter Qtr Sec 3 W—6:20-8:50, MinMet 124, Norman

Spring Qtr Sec 4 M—6:20-8:50, LindH 325, Alden

★Engl 1104 (formerly Comp 1104) **INTRODUCTION TO POETRY WRITING**. 4 degree credits, §Comp 1104, 1111, \$148.

Workshop for beginning students. Discussion of student poems, numerous assignments, formal experiments. No manuscript prerequisite. (No prereq. Limited to 22)

Winter Qtr Sec 1 T—6:20-8:50, LindH 315, Browne

Engl 1016 **INTRODUCTION TO AMERICAN LITERATURE**. 4 degree credits, \$148 (♦\$74) (IS)

Critical discussion of and writing about selected works of American literature. Typical authors: Poe, Hawthorne, Whitman, Dickinson, Twain, Frost, Fitzgerald. (No prereq)

Fall Qtr Sec 1 W—6:20-8:50, LindH 303

Engl 1018 **INTRODUCTION TO MODERN FICTION**. 4 degree credits, \$148 (♦\$74)

Critical discussion of and writing about selected modern novels and stories. Typical authors: Conrad, Lawrence, Joyce, Woolf, Hemingway, Faulkner, Nabokov. (No prereq)

Winter Qtr Sec 1 Th—6:20-8:50, LindH 302

★Engl 3101 (formerly Comp 3101) **INTERMEDIATE FICTION WRITING**. 4 degree credits, §Comp 3101, \$154. (IS)

Course for those with some experience in fiction writing. Discussion of students' works and set texts; assignments, and experiments. (No prereq. Limited to 20)

Spring Qtr Sec 1 T—6:20-8:50, LindH 203, Delattre

★Engl 3104 (formerly Comp 3104) **INTERMEDIATE POETRY WRITING**. 4 degree credits, §Comp 3104, \$154. (IS)

Course for those with some experience in poetry writing. Discussion of students' works and set texts; assignments and experiments. (No prereq. Limited to 20)

Fall Qtr Sec 1 T—6:20-8:50, LindH 315, Browne

See also Radio Course, Engl 3710, **Perspectives on Literature**, page 551.

★Engl 5100 (formerly Comp 5100) **ADVANCED NONFICTION WRITING: INTRODUCTION TO EDITING**. 4 degree credits, \$154.

The goal of the course is to teach everything a beginning editor should know, from copyright law and how to use the *Chicago Manual of Style* to the nature of the editor-writer relationship and what makes manuscript readable. Students will get extensive practice doing line editing. They will become acquainted with the publishing industry, especially in Minnesota. Finally, they will be introduced to the rudiments of developmental editing. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 32)

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Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

CEW	Fall Qtr	Sec 1	W—1-3:30, MacP (Limit 25) <i>Offered through Continuing Education for Women</i>
	Winter Qtr	Sec 2	W—6:20-8:50, LindH 315
CEW	Spring Qtr	Sec 3	W—1-3:30, MacP (Limit 25) <i>Offered through Continuing Education for Women</i>

- ★Engl 5101 **ADVANCED FICTION WRITING.** 4 degree credits, \$154.
For students with considerable experience in fiction writing. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)
- Fall Qtr** Sec 1 Th—6:20-8:50, LindH 229, Delattre

Literature courses

(See other literature courses in American Studies, Classics, General College, German, Humanities, Informal Courses, Scandinavian Languages, Slavic Languages, Spanish, and Women's Studies.)

- ★Engl 1009 **INTRODUCTION TO THE STUDY OF LITERATURE.** 4 degree credits, \$148. (◆\$74)

Reading of selected literary works with emphasis on learning basic techniques and terminology of literary study: major literary forms, traditions, and conventions, frames of reference, metrics, the critical reading of literary works in general, and the conventions employed in the presentation of literary criticism and scholarship. (No prereq. Limited to 36)

Fall Qtr	Sec 1	Th—6:20-8:50, MinMet 120
Winter Qtr	Sec 2	M—6:20-8:50, LindH 229
Spring Qtr	Sec 3	T—6:20-8:50, Robbinsdale/Armstrong HS, Plymouth, Brown
	Sec 4	Th—6:20-8:50, LindH 217

- Engl 3111 SURVEY OF ENGLISH LITERATURE.** 4 degree credits, \$154. (◆\$77) (IS)
Historical survey of major figures, movements, and trends in English literature. Chaucer to Marvell, including Spenser, Shakespeare, and Donne. (No prereq)
- Winter Qtr** Sec 1 M—6:20-8:50, LindH 217, Rosendahl

- Engl 3112 SURVEY OF ENGLISH LITERATURE.** 4 degree credits, \$154. (◆\$77) (IS)
Historical survey of major figures, movements, and trends in English literature: Milton to Johnson, including Dryden, Swift, and Pope. (No prereq)
- Spring Qtr** Sec 1 M—6:20-8:50, LindH 217, Hurrell

- ★Engl 3241 **SHAKESPEARE.** 4 degree credits, \$154. (◆\$77) (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 36)
- | | | |
|-------------------|-------|---------------------------------|
| Fall Qtr | Sec 1 | T—6:20-8:50, LindH 203, Clayton |
| Winter Qtr | Sec 2 | T—6:20-8:50, LindH 305, Reed |

- ★Engl 3242 **SHAKESPEARE.** 4 degree credits, \$154. (◆\$77) (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 36)
- Spring Qtr** Sec 1 W—6:20-8:50, LindH 203

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

- Engl 3251 THE KING JAMES BIBLE AS LITERATURE.** 4 degree credits, \$154. (◆\$77)
The Old Testament and literary tradition. The historical narratives, prophets, psalms, and wisdom literature. (No prereq)
Spring Qtr Sec 1 **Th**—6:20-8:50, LindH 229, O'Brien
- Engl 3413 SURVEY OF AMERICAN LITERATURE.** 4 degree credits, \$154. (◆\$77) (IS)
Historical survey of important authors, intellectual currents, movements, conventions, genres, and themes. Lecture course, with wide reading. Stephen Crane through World War II (1900-1945). (No prereq)
Spring Qtr Sec 1 **W**—6:20-8:50, LindH 229, Solotaroff
- Engl 3455 AMERICAN SHORT STORY.** 4 degree credits, \$154. (◆\$77) (IS)
Typical authors: Irving, Poe, Hawthorne, Twain, Crane, Cather, Faulkner, Welty, Bellow. (No prereq)
Winter Qtr Sec 1 **W**—6:20-8:50, LindH 229, MacLeish
- Engl 3671 THE NOVEL.** 4 degree credits, \$154. (◆\$77)
An introduction to the novel as a literary form. Readings of selected works of fiction from the 18th century to the present. (No prereq)
Winter Qtr Sec 1 **T**—6:20-8:50, LindH 229, Hirsch
- Engl 3718 PRACTICAL CRITICISM.** 4 degree credits, \$154. (◆\$77)
The practice of literary criticism examined through class discussion and writing of papers on works of English and American literature; some attention to critical techniques, approaches, and terminology.
Winter Qtr Sec 1 **T**—6:20-8:50, LindH 217, Anderson
- Engl 3851 THE ENGLISH LANGUAGE.** 4 degree credits, \$5851, \$154. (◆\$77)
Introduction to the English language including English grammars, phonetics and phonology, British and American dialects, and native-language acquisition. (No prereq)
Fall Qtr Sec 1 **Th**—6:20-8:50, LindH 203, MacLeish
Spring Qtr Sec 2 **Th**—6:20-8:50, LindH 305, Escure
- (See also Linguistics)
- Engl 3910 TOPICS IN ENGLISH AND AMERICAN LITERATURE: THE CELTIC WORLD.** 4 degree credits, \$154. (◆\$77)
A survey of the history, folkways, and traditional oral culture of the six Celtic countries (Brittany, Cornwall, Ireland, Isle of Man, Scotland, and Wales). (No prereq)
Fall Qtr Sec 1 **M**—6:20-8:50, LindH 305, Suppe.
- Engl 3910 TOPICS IN ENGLISH AND AMERICAN LITERATURE: AMERICAN POETRY AND POPULAR SONG.** 4 degree credits, \$154. (◆\$77)
The parallel developments of American lyric poetry and popular song lyrics between 1900 and 1950. Representative works by poets such as William Carlos Williams, e.e. cummings, and Marianne Moore, and songwriters such as Ira Gershwin, Cole Porter, and Dorothy Fields. (No prereq. Meets concurrently with AmSt 3920, sec 1)
Fall Qtr Sec 2 **Th**—6:20-8:50, LindH 305, Furia

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Engl 3920 TOPICS IN ENGLISH AND AMERICAN LITERATURE: AMERICAN NATURE WRITING. 4 degree credits, \$154. (◆\$77) (IS)

Not a course in American classics, though the starting point will be Thoreau's *Walden*. Books to be read might include John Muir's *Range of Light*, Aldo Leopold's *Sand County Almanac*, John McPhee's *Coming into the Country*, and Sigurd Olson's *The Singing Wilderness*. Topics to be discussed: Is there a particularly "American" view of nature? Is nature innocent or fallen in these books? Do these writers imagine nature as male or female? (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, LindH 302, Sugnet

Engl 3940 FIGURES IN ENGLISH AND AMERICAN LITERATURE: SHAKESPEARE ON FILM. 4 degree credits, \$154 plus \$10 course fee. Total \$164. (◆\$77 plus \$10 course fee. Total \$87)

A study of selected texts includes *Romeo and Juliet*, *Hamlet*, *King Lear*, and *Macbeth*, and film versions by Olivier, Zeffirelli, Welles, Kurosawa, and others. Films will be shown during class hour. (No prereq)

Winter Qtr Sec 1 **Th**—6:10-9:30, LindH 229, Silberman

Engl 3940 FIGURES IN ENGLISH AND AMERICAN LITERATURE: AMERICAN WOMEN WRITERS. 4 degree credits, \$154. (◆\$77) (IS)

Reading and discussion of major works by nineteenth- and early twentieth-century American women writers: Dickinson, Fuller, Alcott, Stowe, Jewett, Chopin, Cather, Stein, etc. The course will attempt to center on the possible expressions of gender as fiction, structure, ideology, and language, but will not be restricted to that. (No prereq)

Spring Qtr Sec 2 **M**—6:20-8:50, LindH 215, Roth

Engl 3940 FIGURES IN ENGLISH AND AMERICAN LITERATURE: AMERICAN WOMEN WRITERS. 4 degree credits, \$154.(◆\$77)

Women's stories, women's voices. A look at the stories women have chosen to tell and the various voices in which they have chosen to tell them. Readings from prose writers such as Harriet Beecher Stowe, Louisa May Alcott, Kate Chopin, Willa Cather, Meridel Le Sueur, and Toni Morrison; from poets such as Emily Dickinson and Adrienne Rich. (No prereq)

Spring Qtr Sec 3 **Th**—1-3:30, MacP

Offered through Continuing Education for Women

Engl 3950 FIGURES IN ENGLISH AND AMERICAN LITERATURE: SINCLAIR LEWIS, NOVELIST OF THE TWENTIES. 4 degree credits, \$154. (◆\$77)

A careful reading of *Main Street*, *Babbitt*, *Arrowsmith*, *Elmer Gantry*, *Dodsworth*, and *Can't Happen Here*. Class work will be mainly discussion of the novels and attention to their literary worth, relation to Lewis's Minnesota background, and implications for the American scene in the first half of the 20th century. (No prereq)

Spring Qtr Sec 1 **Th**—6:20-8:50, ClaOff B30, StP Campus, Rosendahl

Engl 5174 MODERN DRAMA, 1880-1920. 4 degree credits, \$154.

Beginnings of modern realism, naturalism, and expressionism in English and continental drama. (No prereq. 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, LindH 229, Hurrell

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Engl 5175 MODERN DRAMA SINCE 1920. 4 degree credits, \$154. (◆\$77)

Chief dramatists, English, American, and continental. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—6:20-8:50, LindH 229, Leyasmeyer

Engl 5221 CHAUCER. 4 degree credits, \$154. (◆\$77)

A reading of the *Canterbury Tales* and an introduction to Chaucer's language. This course is prerequisite to all other courses in Middle English Literature (5215-5222). (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **T**—6:20-8:50, LindH 217, Mitchell

Engl 5261 MILTON. 4 degree credits, \$154. (◆\$77)

Paradise Lost, *Samson Agonistes*, minor poems, *Areopagitica*, and often *Paradise Regained*. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—6:20-8:50, LindH 303, O'Brien

Engl 5451 AMERICAN NOVEL. 4 degree credits, \$154. (◆\$77)

Through the 19th century. Typical authors: Cooper, Hawthorne, Melville, Stowe, Twain, James. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **M**—6:20-8:50, LindH 215, Roth

Engl 5452 AMERICAN NOVEL. 4 degree credits, \$154. (◆\$77)

Late 19th and 20th centuries. Typical authors: James, Dreiser, Cather, Hemingway, Fitzgerald, Faulkner. (No prereq. Qualified students may register for graduate credit at the University of Minnesota.)

Winter Qtr Sec 1 **M**—6:20-8:50, MurH 308, Bales

Engl 5610 20TH-CENTURY WRITERS: CONTEMPORARY AMERICAN NOVELS. 4 degree credits, \$154. (◆\$77)

In the course, we will read and discuss five novels, most of which will deal with the characters' attempts to accommodate their desires and ways of seeing Post-World War II America to some of the realities of this time and place. Some possible novels: Walker, *The Color Purple*; Doctorow, *The Book of Daniel*; Updike, *Rabbit is Rich*; Oates, *them*; Stone, *Dog Soldiers*; Tyler, *Dinner at the Homesick Restaurant*. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—6:20-8:50, LindH 215, Solotaroff

Engl 5610 20TH-CENTURY WRITERS: FROST, STEVENS, ELIOT. 4 degree credits, \$154. (◆\$77)

Selected writings in prose and poetry by Robert Frost, Wallace Stevens, and T.S. Eliot, with emphasis on the poems of Frost and Eliot, including some attention to the biographical context. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 2 **W**—6:20-8:50, LindH 215, Hancher

Engl 5610 20TH-CENTURY WRITERS: THE TWENTIES. 4 degree credits, \$154. (◆\$77)

American literature, art, and music in the years after World War I with particular attention to New York and Paris as international centers of the modernist movement.

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Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Representative works by Fitzgerald, Stein, Hemingway, Williams, Stieglitz, O'Keefe, Duchamp, the Gershwins, and others. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with AmSt 5920, sec 2)

Spring Qtr Sec 3 T—6:20-8:50, LindH 320, Furia

Engl 5620 BRITISH AND AMERICAN WOMEN WRITERS. 4 degree credits, \$154. (◆\$77)

Readings in works of one or more women writers, perhaps examining various times within various forms. We will study poetry and novels by great Victorian women writers for the evidence their writing provides from a female perspective of the impact of revolutionary change—personal, social, religious, technological, aesthetic—on English Victorian culture. Particular attention will be given to the imaginative transformation of various feminine facets of the human condition into literature that illuminates some of the rich complexities of the Victorian temperament. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

CEW

Winter Qtr Sec 1 W—1-3:30, MacP

Offered through Continuing Education for Women

Engl 5852-5853-5854 MODERN IRISH LITERATURE. 4 degree credits each quarter, \$154 each quarter.

Survey of the grammatical structures of the modern Irish dialect of Connemara, Co. Galway; emphasis on development of skills in both oral and written language: vocabulary, manipulation of grammatical structures, speaking, listening, reading and writing practice; some study of modern Gaelic culture. *No previous knowledge of Modern Irish required.* (No prereq for 5852; 5852 for 5853; 5853 for 5854. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr 5852 Sec 1 W—6:20-8:50, LindH 320, Stenson

Winter Qtr 5853 Sec 2 W—6:20-8:50, LindH 320, Stenson

Spring Qtr 5854 Sec 3 W—6:20-8:50, LindH 320, Stenson

(A joint Day/Extension class)

Engl 5910 TOPICS IN ENGLISH AND AMERICAN LITERATURE: HEALTH CARE IN LITERATURE. 4 degree credits, \$Phar 5305, \$HSU 5029, \$154.

An exploration of health care issues through their embodiment in such books as *Cancer Ward*, *The Plague*, *As We Are Now*, *The Elephant Man*, and *Love Among the Ruins*. Themes to be investigated include terminal care, the patient-practitioner relationship, the elderly patient, mental health and madness, scientific research, and the politics of health-care institutions. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HSU 5029 and Phar 5305)

Winter Qtr Sec 1 Th—4:15-6, HSUnitF 2-140, Galle

Engl 5940 FIGURES IN ENGLISH AND AMERICAN LITERATURE: HITCHCOCK FILMS. 4 degree credits, \$ArtH 5940, \$154 plus \$10 course fee. Total \$164. (◆\$77 plus \$10 course fee. Total \$87)

The major thematic concerns of the American films of Alfred Hitchcock, and the formidable arsenal of his cinematic technique. Thematic concerns include guilt, complacency, paralysis, romantic obsession, the idea of the double, and the seductiveness of evil. Techniques studied include the uses of suspense instead of surprise, transference of guilt—or is that a theme? The precise placing of objects in the frame; the bravura range of his close-ups, low- and high-angle shots; the

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obsessive moving camera. (Students explore the suggestion that Hitchcock moves from an Aristotelian phase, gaining his effects by involving viewers with sensibilities of his characters, toward a move-alienated, Brechtian attitude that asks instead for a moral judgment of them.) Some consideration paid to more recent Freudian, structuralist, and feminist readings of his work. Open to all 5000-level eligible students, whether or not they have had a previous film course; those who have not, however, will be asked to do a bit more background reading. Texts include Francois Truffault's *Hitchcock*. Probably Huss and Silverstein's *The Film Experience*. J. Monaco's *How to Read a Film*, and perhaps Rohmer and Chabrol's *Hitchcock*. Films shown on Tuesdays; lecture and discussion on Thursdays. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Arth 5940)

Spring Qtr Sec 1 **W**—6-9:30, CMU Theater, 1st floor, Russell

Engl 8690 SEMINAR: STUDIES IN DRAMA: GEORGE BERNARD SHAW AND SOCIAL DRAMA. 4 degree credits, \$340.

An examination of the ways in which late 19th and early 20th century dramatists attempted to reshape conventional dramatic form into a credible vehicle for the presentation of social problems (especially what was then called "the woman problem"). The course will be organized around George Bernard Shaw's dramatic relationship to his contemporaries and immediate predecessors, particularly Ibsen, and will reconsider playwrights like Pinero, Galsworthy, and H.A. Jones, whose once formidable reputations were (irretrievably?) damaged by the theatrical success of Shaw. Thus, one aim of the seminar will be the investigation of the "canon" of modern British drama. About 12 plays will be studied, and some reading in dramatic history and theory will be expected. A more detailed prospectus for the course is available from the English Department, 207 Lind Hall (373-2595), so that students may do some advance preparation. (No prereq. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class)

Fall Qtr Sec 1 **Th**—6:20-8:50, LindH 216, Hurrell

Engl 8690 SEMINAR: STUDIES IN 20TH-CENTURY BRITISH AND AMERICAN LITERATURE. 4 degree credits, \$340.

The works of two major American playwrights, O'Neill and Williams. O'Neill writing after the first world war and Williams after the second, consciously reacting against the existing theatrical traditions and practices, deliberately set out to experiment, to explore the relationship between life and the stage, artifice and reality, and to lead the American theater in new directions. In many ways they are different: their plays have a "touch of the poet" about them, and reflect in their works significant cultural attitudes, as demonstrated by *The Emperor Jones*, *The Hairy Ape*, *Desire Under the Elms*, *the Great God Brown*, *The Ice-Man Cometh*, *Long Day's Journey Into Night*, and *The Glass Menagerie*, *A Streetcar Named Desire*, *Cat on a Hot Tin Roof*, *Night of the Iguana*. Where possible, this course will also consider film versions and local productions of these works. (No prereq. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class)

Spring Qtr Sec 2 **W**—6:20-8:50, LindH 315, Leyasmeyer

SPRING QUARTER IN LONDON: English and Theatre Arts

Literature in London: Spring quarter in London, England, cosponsored by the departments of English and Theatre Arts, and the Extension Classes Office of Study Abroad. Incorporates literary history, geographical and cultural perspectives into reading and study of literature and drama. Graduate credit available. (12 credits.) **For information:** call Extension Classes Office of Study Abroad at 376-5049.

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English as a Second Language (ESL)

College of Liberal Arts

Textbooks for most ESL courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

Students registering for ESL courses must take either the Minnesota Battery of English Language Proficiency (MBatt) or the Test of English as a Foreign Language (TOEFL). Arrangements to take one of these tests can be made through the International Student Adviser Office. Arrangements for taking the test must be completed well in advance of registration. Call 373-3834 for information. After receiving the test score, contact Extension Counseling, 373-3905, for registration information.

★**ESL 0115-0116 FUNDAMENTALS IN ENGLISH AS A SECOND LANGUAGE.** No credit, \$185 plus \$5 course fee each quarter. Total \$190 each quarter.

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 from Extension Counseling, 314 Nolte Center [373-3905]. Limited to 20)

Fall Qtr 0115 Sec 1 **TTh**—6:20-8:50, ChDev 216

Winter Qtr 0116 Sec 2 **TTh**—6:20-8:50, KoltH S138

★**ESL 0117 READING AND VOCABULARY SKILLS IN ENGLISH AS A SECOND LANGUAGE.** No credit, \$185 plus \$5 course fee. Total \$190.

Practice of reading techniques designed to improve comprehension and increase reading speed; word forms, usage, synonyms, and antonyms are studied with reference to an English-English dictionary; opportunities to increase active vocabulary through discussion activities and receptive vocabulary through listening and reading exercises. **Must be taken S-N.** (Prereq a satisfactory score on the MBatt or TOEFL; and written permission from Extension Counseling, 314 Nolte Center [373-3905]. Limited to 20)

Spring Qtr Sec 1 **MW**—6:20-8:50, KoltH S138

★**ESL 0125-0126-0127 DEVELOPING FLUENCY IN ENGLISH AS A SECOND LANGUAGE.** No credit, \$185 plus \$5 course fee each quarter. Total \$190 each quarter.

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; students also write short compositions on a regular basis; content is drawn from the mass media. **Must be taken S-N.** (Prereq a satisfactory score on the MBatt or TOEFL; and written permission from Extension Counseling, 314 Nolte Center [373-3905]. Limited to 20)

Fall Qtr 0125 Sec 1 **TTh**—6:20-8:50, SmithH 111

Winter Qtr 0126 Sec 2 **TTh**—6:20-8:50, KoltH S139

Spring Qtr 0127 Sec 3 **TTh**—6:20-8:50, KoltH S134

★**ESL 0136 ENGLISH FOR SCIENCE AND TECHNOLOGY.** No credit, \$185 plus \$5 course fee. Total \$190.

An advanced course for non-native speakers who work or study in technical fields; deals with language used to express the scientific method; students write hypotheses

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and procedures, describe experiments, present results, and write conclusions; attention is also given to descriptions of mechanisms and processes; development of sub-technical vocabulary. **Must be taken 5-N.** (Prereq a satisfactory score on the MBatt or TOEFL; and written permission from Extension Counseling, 314 Nolte Center [373-3905]. Limited to 20)

Spring Qtr Sec 1 TTh—6:20-8:50, KoltH S137

Entomology (Ent)

College of Agriculture

Textbooks for most Ent courses are available at Books Underground on the St. Paul campus (373-0800).

No courses offered 1984-85.

Joint Day/Extension Classes

You may register through Extension for most 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 376-3000 two weeks before mail registration for that quarter begins.

F

Family Planning Administration (FPAd)

Medical School

Textbooks for most FPAd courses are available at the Health Sciences Bookstore (376-4007).

No courses offered 1984-85.

Family Practice and Community Health (FPCH)

Medical School

Textbooks for most FPCH courses are available at the Health Sciences Bookstore (376-4007).

Edmond E. Coleman, Assistant Professor of Family Practice and Community Health
Herbert H. Laube, Assistant Professor of Family Practice and Community Health

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Courses and sections in red have limits on enrollment. See page 20.

Sandra L. Nohre, *Research Fellow in Family Practice and Community Health*
Sharon B. Satterfield, *Assistant Professor of Family Practice and Community Health*

★**FPCH 5950 CLINICAL ISSUES IN HUMAN SEXUALITY (formerly Sexual Health Seminar).** 3 degree credits, \$186.

A course examining clinical issues, assessment techniques, and treatment techniques to common sexual problems. (Prereq enrollment in graduate programs in Counseling and Student Personnel Psychology, Psychology, Public Health, Social Work, Family Social Science 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 T—4-6, PHS, 2630 Univ Ave SE, Coleman

★**FPCH 5956 ADVANCED TOPICS IN HUMAN SEXUALITY (formerly Human Sexuality in the Life Cycle).** 3 degree credits, \$186 plus \$15 course fee. Total \$201.

A course examining psychosocial aspects of sex throughout the life cycle with special emphasis on the development of role-related behaviors and patterns of erotic attachment. (Prereq # and college-level introductory course in human sexuality. May not be taken for graduate credit. A joint Day/Extension class limited to 30 Extension students)

Winter Qtr Sec 1 Th—4-6, PHS, 2630 Univ Ave SE, Laube

★**FPCH 5957 FEMALE SEXUALITY.** 3 degree credits, \$186 plus \$15 course fee. Total \$201.

A general lecture and discussion course dealing with basic aspects of the female experience of sexuality. (Prereq written #. May not be taken for graduate credit. A joint Day/Extension class limited to 30 Extension students)

Winter Qtr Sec 1 Th—3:30-5, PHS, 2630 Univ Ave SE, Nohre

Family Social Science (FSoS)

College of Home Economics

Textbooks for FSoS courses taught on the St. Paul campus are available at Books Underground (373-0800); books for courses taught on the Minneapolis campus are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450).

(See also College of Home Economics; General College)

Linda Budd, *Lecturer in Family Social Science*

Constance Fabunmi, *Instructor, Alcohol and Drug Counseling Education Program*

Bruce Fischer, *Instructor, Alcohol and Drug Counseling Education Program*

William J. Goodman, *Adjunct Assistant Professor, Alcohol and Drug Counseling Education Program*

Jan Greenberg, *Teaching Assistant in Family Social Science*

Janice Hogan, *Professor of Family Social Science*

Susan Kwiecien, *Teaching Assistant in Family Social Science*

Mary M. Leach, *Teaching Assistant in Family Social Science*

Sally Maison, *Lecturer in Family Social Science*

Hamilton McCubbin, *Professor and Head, Family Social Science*

Gerhard Neubeck, *Professor of Family Social Science*

Vincent C. Pletcher, *Adjunct Instructor, Alcohol and Drug Counseling Education Program*

Gretchen Stein-Schmitt, *Lecturer in Family Social Science*

See the Alcohol and Drug Counseling Program, page 202.

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FSoS 1001 DYNAMICS OF FAMILY RELATIONSHIPS. 3 degree credits, \$1002, \$111 plus \$1 special fee. Total \$112. (♦\$55.50 plus \$1 special fee. Total \$56.50) (IS)

Applications of behavioral sciences to mate selection, interaction in marriage, and other committed relationships, sex roles, maintaining, and ending of relationships. (No prereq)

Winter Qtr Sec 1 **W**—6:20-8:50, Mgmt/Econ 160, Leach

FSoS 1025 PARENTHOOD. 4 degree credits, \$148. (♦\$74)

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 **T**—6:20-8:50, RarigC 616, Kwiecien

★**FSoS 5001 HUMAN SEXUAL BEHAVIOR.** 4 degree credits, \$196. (IS)

Nature of sexual functioning; sexual development, ethics and attitudes, research problems. (Prereq 15 credits in psychology or sociology. Qualified students may register for graduate credit at the University of Minnesota. Limited to 50)

Winter Qtr Sec 1 **W**—6:20-8:50, RarigC 616, Stein-Schmitt

FSoS 5002 ADOLESCENT SEXUALITY. 3 degree credits, \$147.

Review of adolescent development. Patterns of sexual behavior during adolescence. Contraceptive use and non-use. Parental and institutional sex instruction. Adolescent pregnancy and parenthood. (Prereq 5001 or #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Th**—6:20-8:50, McNH 69, StP Campus, Neubeck

FSoS 5025 PARENTING. 4 degree credits, \$196. (♦\$98)

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)

Winter Qtr Sec 1 **Th**—6:20-8:50, McNH 197, StP Campus, Budd

FSoS 5200 FAMILY RELATIONSHIP. 5 degree credits, \$245. (IS)

Analysis of the family as an institution and system of relationships. Survey of current developments in the study of the family. Analysis of changes in American society and their influences on family life. (Prereq Psy 1001 or equivalent, Soc 1001 or equivalent. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—6:20-8:50, McNH 197, StP Campus, Budd

See also **Radio Course, FSoS 5230, American Families in Transition, page 551.**

★**FSoS 5240 TOPICS: FEMALE SEXUALITY.** 3 degree credits, \$147.

How women feel about their sexuality. Focuses on women's sexuality, communication, and power. Discussion topics include sexual development, sex roles and what they have to do with sexuality, basics of sexual function and dysfunction, biology, myths. What gets in the way of women being what they want to be; emotional and physical sex growth areas. Lecture and discussion with audiovisual support. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Fall Qtr Sec 1 **T**—10:15 a.m.-12, BlegH 335, Maison

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Offered through Continuing Education for Women

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FSoS 5240 SPECIAL TOPICS: FAMILIES IN LATER LIFE. 3 degree credits, \$147 (♦\$73.50)

Examines the body of research and theory pertaining to family relationships in middle age and aging years from a family development perspective. Particular emphasis on the role of the counselor in helping family members cope with changes in the nature of the adult-child-aging parent relationship resulting from chronic illness and other losses. (Prereq 5200 or #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 2 T—6:20-8:50, Mgmt/Econ 128, Greenberg

FSoS 5240 Family Stress and Coping, is offered as a Television Course. See page 551.

FSoS 5240 SPECIAL TOPICS: MYTHS AND NOTIONS ABOUT PARENTING. 4 degree credits, \$196. (♦\$98)

Examines the myths that are perpetuated in our society about parenting and discusses their basis or lack of basis in reality. Examines the literature written for the lay public in both magazine and book format and talks about what theoretical foundations there are for such literature. (Prereq 1025 or CPsy 1301. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 3 M—6:20-8:50, McNH 198, StP Campus, Budd

FSoS 5240 SPECIAL TOPICS IN FAMILY SOCIAL SCIENCE. 3 degree credits, \$PubH 5609, \$SW 0519C, \$147. (IS)

Focus this offering: Psychology of Stress, Coping, and Adaptation: Implications for Practice. Psychological concepts of stress and its impact on physical and psychological health will be examined along with theories of human coping and adaptation. Designed for those professionals (social workers, nurses, physicians, psychologists, counselors and clergy) whose work involves individuals and families under stress and faced with crises. Particular attention will be paid to the positive and negative aspects of stress, individual methods of managing stress, and the role of the family and the community in aiding individuals and families coping with stress. Counseling emphasis will be on crisis intervention. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 4 Th—6:20-8:50, McNH 69, StP Campus, McCubbin

FSoS 5260 DYNAMICS OF FAMILY DECISION MAKING. 3 degree credits, \$147.

Conceptual models of decision making and resource management. Review and critique of current research and literature. (Prereq 3260 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 W—4:45-7:15, McNH 197, StP Campus, Hogan

Hsg 5301 THE FAMILY AND ENERGY ISSUES.

See description in the new Housing section of this Bulletin.

Alcohol and drug counseling education

YOUR ATTENTION IS ALSO CALLED TO THE ALCOHOL AND DRUG COUNSELING EDUCATION CERTIFICATE, page 584.

To obtain a formal application for the certificate program, write to the Alcohol and Drug Counseling Education Program, University of Minnesota, Family Social Science, 290

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McNeal Hall, 1985 Buford Ave., St. Paul, MN 55108. Or call the program office at (612) 373-8175.

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 evaluation session.

All courses were listed formerly with Public Health (PubH). Course numbers remain the same.

FSoS 3026 ASSESSMENT OF ALCOHOL AND DRUG ABUSE PROBLEMS. 4 degree credits, \$196.

Series of lectures and discussions with emphasis on theoretical views of the nature of dependency and drug use problems and approaches to diagnosis and/or assessment. (No prereq. Students interested in graduate credit should see FSoS 5026. Meets concurrently with 5026)

Fall Qtr Sec 1 T—6:15-9:15, McNH 33, StP Campus

FSoS 3027 CURRENT ISSUES AND PHARMACOLOGY OF ALCOHOL AND DRUG ABUSE. 4 degree credits, \$196.

Series of lectures with emphasis on the historical and cultural perspectives of drug use and abuse. Additional topics: men's, women's, adolescents', minority, and sexuality issues. Fundamental principles of pharmacology as apply to the various classifications of mood altering chemicals. (No prereq. Students working toward the certificate must take this course A-N. Students interested in graduate credit should see FSoS 5027. Meets concurrently with 5027)

Winter Qtr Sec 1 T—6:15-9:15, McNH 69, StP Campus

FSoS 3028 TREATMENT OF ALCOHOL AND DRUG USE PROBLEMS. 4 degree credits, \$196.

Continuum of treatment responses and treatment planning for substance abusers. Topics covered include prevention, self-help groups, professional ethics, nutrition, alternative treatments, aftercare programming, evaluation, and some pragmatics of counseling. (No prereq. Students working toward the certificate must take this course A-N. Students interested in graduate credit should see FSoS 5028. Meets concurrently with 5028)

Spring Qtr Sec 1 T—6:15-9:15, McNH 33, StP Campus

FSoS 3029 COUNSELING SKILLS PRACTICUM I. 4 degree credits, \$196.

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-N. 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—6-10, Sept. 26-Oct. 31, Arr, StP
Campus, Fabunmi

Sa—9 a.m.-5, Oct. 6, Arr, StP

Campus, Fabunmi

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	Sec 2	W—6-10, Sept. 26-Oct. 31, Arr, StP Campus, Fabunmi Sa—9 a.m.-5, Oct 6, Arr, StP Campus, Fabunmi
Winter Spec Term	Sec 3	W—6-10, Jan. 9-Feb. 13, Arr, StP Campus, Fabunmi Sa—9 a.m.-5, Jan. 19, Arr, StP Campus, Fabunmi
	Sec 4	W—6-10, Jan. 9-Feb. 13, Arr, StP Campus Sa—9 a.m.-5, Jan. 19, Arr, StP Campus
Spring Spec Term	Sec 5	W—6-10, Apr. 3-May 8, Arr, StP Campus, Fabunmi Sa—9 a.m.-5, Apr. 13, Arr, StP Campus, Fabunmi
	Sec 6	W—6-10, Apr. 3-May 8, Arr, StP Campus, Fabunmi Sa—9 a.m.-5, Apr. 13, Arr, StP Campus, Fabunmi

FSoS 3030 COUNSELING SKILLS PRACTICUM II. 4 degree credits, \$196.

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-N. 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	W—6-10, Nov. 7-Dec. 5, Arr, StP Campus, Fabunmi Sa—9 a.m.-5, Nov. 10, Arr, StP Campus, Fabunmi <i>No late fee through Oct. 31</i>
	Sec 2	W—6-10, Nov. 7-Dec. 5, Arr, StP Campus, Fabunmi Sa—9 a.m.-5, Nov. 10, Arr, StP Campus, Fabunmi <i>No late fee through Oct. 31</i>
Winter Spec Term	Sec 3	W—6-10, Feb 20-Mar. 20, Arr, StP Campus Sa—9 a.m.-5, Feb 23, Arr, StP Campus <i>No late fee through Feb. 13</i>
	Sec 4	W—6-10, Feb 20-Mar. 20, Arr, StP Campus

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		Sa —9 a.m.-5, Feb. 23, Arr, StP Campus <i>No late fee through Feb. 13</i>
Spring Spec Term	Sec 5	W —6-10, May 8-June 5, Arr, StP Campus, Goodman Sa —9 a.m.-5, May 11, Arr, StP Campus <i>No late fee through May 1</i>
	Sec 6	W —6-10, May 8-June 5, Arr, StP Campus Sa —9 a.m.-5, May 11, Arr, StP Campus <i>No late fee through May 1</i>

FSoS 3031 COUNSELING SKILLS PRACTICUM III. 4 degree credits, \$196.

Designed to provide students with exposure to advanced therapeutic methods. Topics include double bind theory, use of paradox, working with resistant clients, neurolinguistic programming. (Prereq 3030 or #. Students working toward the certificate must take this course A-N. Students interested in graduate credit should see FSoS 5031. Meets concurrently with FSoS 5031. Limited to a combined total of 18)

Fall Spec Term	Sec 1	Th —6-10, Oct. 25-Dec. 6 (no class Nov. 22), McNH 198, StP Campus, Fischer Sa —9 a.m.-5, Dec. 1, McNH 198, StP Campus, Fischer <i>No late fee through Oct. 18</i>
Winter Spec Term	Sec 2	Th —6-10, Jan 10-Feb 14, McNH 198, StP Campus, Fischer Sa —9 a.m.-5, Jan 26, McNH 198, StP Campus, Fischer <i>No late fee through Jan. 3</i>
Spring Spec Term	Sec 3	Th —6-10, May 9-June 13, McNH 198, StP Campus, Fischer Sa —9 a.m.-5, June 1, McNH 198, StP Campus, Fischer <i>No late fee through May 2</i>

FSoS 3032 CHEMICAL ABUSE AND THE FAMILY: AN OVERVIEW. 4 degree credits, \$196.

An introduction to marriage and family counseling 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. (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	M —6:15-9:15, Oct. 1-Nov. 12, McNH 197, StP Campus, Fischer, Goodman Sa —9 a.m.-5, Nov. 10, McNH 197, StP Campus, Fischer, Goodman (continued next page)
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Spring Spec Term Sec 2 **M**—6:15-9:15, Apr. 1-May 13, McNH 197, StP Campus, Fischer, Goodman
Sa—9 a.m.-5, May 4, McNH 197, StP Campus, Goodman

FSoS 3034 TOPICS IN ALCOHOL AND DRUG ABUSE. 1-5 degree credits, \$49 a credit.

Selected readings and/or projects in alcohol and drug use and problems and evaluation of students' mastery of the assigned study. (Prereq written #. Requests for permission to register must be made to William J. Goodman, Adjunct Assistant Professor, Alcohol and Drug Counseling Education Program, Family Social Science, University of Minnesota, 290 McNeal Hall, 1985 Buford Ave., St. Paul, MN 55108)

Fall Qtr Sec 1 **Arr.**, Goodman, Fabunmi, Fischer

Winter Qtr Sec 2 **Arr.**, Goodman, Fabunmi, Fischer

Spring Qtr Sec 3 **Arr.**, Goodman, Fabunmi, Fischer

FSoS 3035 CLINICAL INTERNSHIP IN CHEMICAL USE PROBLEMS. 3-18 degree credits, \$49 a credit plus \$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, 373-8175. **Must be taken S-N.** (Prereq 3026, 3027, 3028, 3030, 3032, 3037 and written #. **Requests for admission should be made to the Internship Program Coordinator in the Alcohol and Drug Counseling Education Program.** 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 3036 SELF-HELP COUNSELING FOR ALCOHOL AND DRUG USE PROBLEMS. 3 degree credits, \$147.

Via experiential learning/lecture, students identify alternative ways in which groups perform basic functions and develop structural outlines for their counseling groups. **Must be taken S-N.** (No prereq. Students interested in graduate credit should see FSoS 5036. Meets concurrently with 5036. Limited to a combined total of 22)

Fall Spec Term Sec 1 **F**—6-10, Nov. 2, McNH 198, StP Campus
Sa—9 a.m.-5, Nov. 3, McNH 198, StP Campus
M—6-10, Nov. 5-19, Arr., Pletcher
No late fee through Oct. 26

Winter Spec Term Sec 2 **F**—6-10, Jan. 11, Arr.
Sa—9 a.m.-5, Jan. 12, McNH 198, StP Campus
M—6-10, Jan. 14-28, McNH 198, StP Campus, Pletcher
No late fee through Jan. 4

★FSoS 3037 GROUP THERAPY: THEORY AND PRACTICE. 3 degree credits, \$147.

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

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

curative factors, and understanding group process. (No prereq. Students interested in graduate credit should see FSoS 5037. Meets concurrently with 5037. Limited to a combined total of 24)

- Fall Spec Term** Sec 1 **ThFSa**—9 a.m.-5, Oct. 11-13, McNH 274,
StP Campus, Fischer, Goodman
No late fee through Oct. 4
- Winter Spec Term** Sec 2 **ThFSa**—9 a.m.-5, Mar. 7-9, McNH 274,
StP Campus, Goodman, Fischer
No late fee through Feb. 28
- Spring Spec Term** Sec 3 **ThFSa**—9 a.m.-5, Apr. 25-27, McNH 274,
StP Campus, Fischer, Goodman
No late fee through Apr. 18

★FSoS 5008 INTROSPECTIVE WORKSHOP AND CLINICAL SUPERVISION. 1 or 2 degree credits, \$49 or \$98.

Special topics, 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 degree credits, \$196.

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, McNH 33, StP Campus

FSoS 5027 PHARMACOLOGY AND CURRENT ISSUES OF ALCOHOL AND DRUG ABUSE. 4 degree credits, \$196.

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, McNH 69, StP Campus

FSoS 5028 TREATMENT OF ALCOHOL AND DRUG ABUSE PROBLEMS. 4 degree credits, \$196.

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, McNH 33, StP Campus

★FSoS 5029 COUNSELING SKILLS PRACTICUM I. 4 degree credits, \$196.

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**—6-10, Sept. 26-Oct. 31, Arr,
StP Campus, Fabunmi
Sa—9 a.m.-5, Oct. 6, Arr, StP Campus,
Fabunmi

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

	Sec 2	W—6-10, Sept. 26-Oct. 31, Arr, StP Campus, Fabunmi Sa—9 a.m.-5, Oct. 6, Arr, StP Campus, Fabunmi
Winter Spec Term	Sec 3	W—6-10, Jan. 9-Feb. 13, Arr, StP Campus, Fabunmi Sa—9 a.m.-5, Jan. 19, Arr, StP Campus, Fabunmi
	Sec 4	W—6-10, Jan. 9-Feb. 13, Arr, StP Campus Sa—9 a.m.-5, Jan. 19, Arr, StP Campus
Spring Spec Term	Sec 5	W—6-10, Apr. 3-May 8, Arr, StP Campus, Fabunmi Sa—9 a.m.-5, Apr. 13, Arr, StP Campus, Fabunmi
	Sec 6	W—6-10, Apr. 3-May 8, Arr, StP Campus, Fabunmi Sa—9 a.m.-5, Apr. 13, Arr, StP Campus, Fabunmi

★FSoS 5030 COUNSELING SKILLS PRACTICUM II. 4 degree credits, \$196.

See course description for FSoS 3030. (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	W—6-10, Nov. 7-Dec. 5, Arr, StP Campus, Fabunmi Sa—9 a.m.-5, Nov. 10, Arr, StP Campus, Fabunmi <i>No late fee through Oct. 31</i>
	Sec 2	W—6-10, Nov. 7-Dec. 5, Arr, StP Campus, Fabunmi Sa—9 a.m.-5, Nov. 10, Arr, StP Campus, Fabunmi <i>No late fee through Oct. 31</i>
Winter Spec Term	Sec 3	W—6-10, Feb. 20-Mar. 20, Arr, StP Campus Sa—9 a.m.-5, Feb. 23, Arr, StP Campus <i>No late fee through Feb. 13</i>
	Sec 4	W—6-10, Feb. 20-Mar. 20, Arr, StP Campus Sa—9 a.m.-5, Feb. 23, Arr, StP Campus <i>No late fee through Feb. 13</i>

(continued next page)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

- Spring Spec Term** Sec 5 **W**—6-10, May 8, June 5, Arr, StP Campus
Sa—9 a.m.-5, May 11, Arr, StP Campus
No late fee through May 1
- Sec 6 **W**—6-10, May 8-June 5, Arr, StP Campus
Sa—9 a.m.-5, May 11, Arr, StP Campus
No late fee through May 1

★FSoS 5031 **COUNSELING SKILLS PRACTICUM III. 4 degree credits, \$196.**
 See description for FSoS 3031. (Prereq 5030. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3031. Limited to a combined total of 18)

- Fall Spec Term** Sec 1 **Th**—6-10, Oct. 25-Dec. 6 (no class meeting Nov. 22), McNH 198, StP Campus, Fischer
Sa—9 a.m.-5, Dec. 1, McNH 198, StP Campus, Fischer
No late fee through Oct. 18

- Winter Spec Term** Sec 2 **Th**—6-10, Jan. 10-Feb. 14, McNH 198, StP Campus, Fischer
Sa—9 a.m.-5, Jan. 26, McNH 198, StP Campus, Fischer
No late fee through Jan. 3

- Spring Spec Term** Sec 3 **Th**—6-10, May 9-June 13, McNH 198, StP Campus, Fischer
Sa—9 a.m.-5, June 1, McNH 198, StP Campus, Fischer
No late fee through May 2

★FSoS 5032 **CHEMICAL ABUSE AND THE FAMILY: AN OVERVIEW. 4 degree credits, \$196.**

See course description for FSoS 3032. (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 **M**—6:15-9:15, Oct. 1-Nov. 12, McNH 197, StP Campus, Fischer, Goodman
Sa—9 a.m.-5, Nov. 10, McNH 197, StP Campus
- Spring Spec Term** Sec 2 **M**—6:15-9:15, Apr. 1-May 13, McNH 197, StP Campus, Fischer, Goodman
Sa—9 a.m.-5, May 4, McNH 197, StP Campus

FSoS 5034 **TOPICS IN ALCOHOL AND DRUG ABUSE. 2-5 degree credits, \$49 a credit.**

Selected readings and/or projects in alcohol and drug use problems and evaluation of students' mastery of the assigned study. (Prereq written #. Requests for permission to register must be made to Adjunct Assistant Professor William J. Goodman, Alcohol and Drug Counseling Education Program, Family Social Science, 290 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.**
Winter Qtr Sec 2 **Arr.**
Spring Qtr Sec 3 **Arr.**

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

FSoS 5035 CLINICAL INTERNSHIP IN CHEMICAL ABUSE PROBLEMS. 3-18 degree credits, \$49 a credit plus \$25 special fee (placement fee).

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, 373-8175. Must be taken S-N.* (Prereq 3026, 3027, 3028, 3030, 3032, 3037, and written #. **Requests for admission should be made to the Internship Program Coordinator in the Alcohol and Drug Counseling Education Program.** 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 5036 SELF-HELP COUNSELING FOR ALCOHOL AND DRUG USE PROBLEMS.** 3 degree credits, \$147.

See course description for FSoS 3036. **Must be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3036. Limited to a combined total of 22)

Fall Spec Term Sec 1 **F**—6-10, Nov. 2, McNH 198

Sa—9 a.m.-5, Nov. 3, McNH 198

M—6-10, Nov. 5-19, **Arr.**, Pletcher

No late fee through Oct. 26

Winter Spec Term Sec 2 **F**—6-10, Jan. 11, **Arr.**

Sa—9 a.m.-5, Jan. 12, McNH 198

M—6-10, Jan. 14-28, McNH 198, Pletcher

No late fee through Jan. 4

FSoS 5037 GROUP THERAPY: THEORY AND PRACTICE. 3 degree credits, \$147.

See course description for FSoS 3037. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3037. Limited to a combined total of 24)

Fall Spec Term Sec 1 **ThFSa**—9 a.m.-5, Oct. 11-13, McNH 274,

StP Campus, Fischer, Goodman

No late fee through Oct. 4

Winter Spec Term Sec 2 **ThFSa**—9 a.m.-5, Mar. 7-9, McNH 274,

StP Campus, Fischer, Goodman

No late fee through Feb. 28

Spring Spec Term Sec 3 **ThFSa**—9 a.m.-5, Apr. 25-27, McNH 274,

StP Campus, Fischer, Goodman

No late fee through Apr. 18

Other optional courses are available on a limited basis. Please call the Alcohol and Drug Counseling Education Program office for further information at (612) 373-8175.

For information on noncredit conferences or workshops in Family Social Science, please contact the Department of Conferences and Institutes, 131 Nolte Center for Continuing Education (373-3151).

For information on off-campus credit courses in Home Economics areas, please call or write College of Home Economics, University of Minnesota, St. Paul, Minnesota 55108 (373-1555).

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Finance (BFin)

School of Management

Textbooks for most BFin courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450).

(See also Fundamentals of Finance and Accounting for the Non-Financial Manager in the noncredit section of this Bulletin listed with Professional Improvement Courses)

Your attention is called to the Credit and Financial Management Certificate program. See the Degrees and Certificates section of this Bulletin.

Jeff Bailey, Lecturer in Finance
Robert Chladil, Lecturer in Finance
Susan Cirillo, Lecturer in Finance
Lance Fisher, Lecturer in Finance
John Kim, Lecturer in Finance
Sundaram Janakarimanan, Lecturer in Finance
George A. Mairs, III, Lecturer in Finance
J. Peter Paulson, Lecturer in Finance
Sailesh Ramamurtie, Lecturer in Finance
Peter Rosko, Associate Professor of Finance
Fred H. Speece, Lecturer in Finance
Rosanne Strege, Lecturer in Finance
James Tobin, Lecturer in Finance

Business degree students must take degree Finance courses A-N.

★**BFin 0001C INTRODUCTION TO INVESTMENTS.** 3 certificate credits, \$111 plus \$10 course fee. Total \$121.

A fundamental course for adult investors who wish a general background of information on the investment field. Course covers nature of various kinds of securities; statistical and investment analysis of securities; vocabulary and practices of the securities business; investment practices of investor groups. (No prereq. Limited to 50)

Fall Qtr Sec 1 **T**—6:10-8:40, AkerH 309, Mairs

Winter Qtr Sec 2 **W**—6:10-8:40, ExpE 193

Spring Qtr Sec 3 **Th**—6:10-8:40, AkerH 225

BFin 0002C CREDIT AND FINANCIAL MANAGEMENT PROBLEMS. 3 certificate credits, \$111 plus \$10 course fee. Total \$121.

Analyzing and solving specific case problems using advanced credit and financial management techniques. Emphasis is placed on the proposal and support of realistic decisions and courses of action. (Prereq Acct 3160, GC 1764 or #)

Winter Qtr Sec 1 **W**—6:10-8:40, FordH 349, Chladil

★**BFin 3000 FINANCE FUNDAMENTALS.** 4 degree credits, \$179 plus \$10 course fee. Total \$189.

Provides students with a comprehensive, analytical introduction to the principal concepts in Finance. After considering the general business environment, the course examines valuation theory. Then financial management decisions concerning uses and sources of funds are presented, thus introducing students to capital budgeting.

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

The course concludes by surveying the nation's financial markets. (Prereq Acct 1024-1025 and 1051 or 3001 and at least 90 credits completed or in progress. **May not be taken S-N.** Limited to 45)

- Fall Qtr** Sec 1 **M**—6:10-9:10, BlegH 205
Sec 2 **T**—6:10-9:10, AndH 250
Sec 3 **W**—6:10-9:10, AndH 250
Sec 4 **Th**—6-9, Minnetonka HS 117 (Limit 30)
Sec 5 **Th**—6:10-9:10, BlegH 150
- Winter Qtr** Sec 6 **M**—6:10-9:10, BlegH 110
Sec 7 **T**—6:10-9:10, BlegH 110
Sec 8 **W**—6:10-9:10, AndH 250
Sec 9 **W**—6-9, Richfield HS 142 (Limit 35)
Sec 10 **Th**—6:10-9:10, BlegH 110
- Spring Qtr** Sec 11 **M**—6:10-9:10, BlegH 205
Sec 12 **T**—6:10-9:10, AndH 250
Sec 13 **W**—6-9, Ramsey HS, Roseville (Limit 30)
Sec 14 **Th**—6:10-9:10, BlegH 420

★**BFin 3100 FINANCIAL MANAGEMENT.** 4 degree credits, \$179 plus \$10 course fee. Total \$189.

A broad case-oriented course building on concepts introduced in 3000. The viewpoint of a corporation's principal financial officer is generally used. Case discussions, augmented by lectures and readings, enable students to apply finance principles in actual business situations. Experience in problem definition, specification of alternatives, analysis, and decisions. Effective verbal and written communication stressed. *Rigorous analysis of the assigned case material prior to each class is expected as preparation for active student participation.* (Prereq 3000 and at least 90 credits completed or in progress. Limited to 40)

Winter Qtr Sec 1 **T**—5:30-8, BlegH 105

★**BFin 3300 INVESTMENT MANAGEMENT AND FINANCIAL MARKETS.** 4 degree credits, \$179 plus \$10 course fee. Total \$189.

Introduces decision procedures in a variety of financial markets. The banking system and other financial intermediaries, risk-return relationships of various marketable securities, analytical techniques of portfolio management in the context of the nation's changing financial markets. (Prereq 3000 and at least 90 credits completed or in progress. Limited to 45)

Fall Qtr Sec 1 **M**—5:30-8, BlegH 215

Winter Qtr Sec 2 **Th**—5:30-8, BlegH 120

Spring Qtr Sec 3 **M**—5:30-8, BlegH 215

★**BFin 3500 REAL ESTATE INVESTMENT ANALYSIS.** 4 degree credits, \$179 plus \$10 course fee. Total \$189.

Analysis and economic aspects of investments in real property including: cash flows; accounting depreciation vs. market value depreciation or appreciation; financing methods and cost; sources of funds; measures of return on investment. (Prereq at least 90 credits completed or in progress; Econ 1002 or equivalent. Limited to 45)

Fall Qtr Sec 1 **W**—4-6:30, BlegH 130

Winter Qtr Sec 2 **Th**—4-6:30, BlegH 135

Spring Qtr Sec 3 **W**—4-6:30, BlegH 135

(See also Real Estate)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Finnish

(See Scandinavian Languages)

Fisheries and Wildlife (FW)

College of Forestry

Textbooks for most FW courses are available at Books Underground on the St. Paul campus (373-0800).

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 376-3000 two weeks before mail registration for that quarter begins.

No courses offered 1984-85.

(See IC 0226, Ecology and Management of Minnesota Fish)

Food Science and Nutrition (FScN)

Colleges of Agriculture and Home Economics

Textbooks for most FScN courses are available at Books Underground on the St. Paul campus (373-0800).

(See also Microbiology; and Informal Courses)

Paul B. Addis, *Professor of Food Science and Technology*
 Amar S. Bakshi, *Assistant Professor of Food Engineering*
 Francis F. Busta, *Professor of Food Microbiology*
 Amy Clarke, *Lecturer in Nutrition*
 Steven D. Clarke, *Assistant Professor of Nutrition*
 Wayne H. Clifford, *Lecturer in Packaging*
 A. Saari Csallany, *Professor of Food Chemistry*
 Eugenia A. Davis, *Associate Professor of Food Chemistry*
 Joan Gordon, *Professor of Food Chemistry*
 Madge N. Hanson, *Instructor in Clinical Nutrition*
 Theodore P. Labuza, *Professor of Food Technology*
 Alfred T. May, *Lecturer in Food Science*
 Larry L. McKay, *Professor of Food Microbiology*
 Howard A. Morris, *Professor of Dairy and Food Technology*
 Stephen D. Phinney, *Assistant Professor of Nutrition*
 Dennis A. Savaiano, *Assistant Professor of Nutrition*
 David E. Smith, *Assistant Professor of Dairy and Food Technology*
 Sita R. Tatinj, *Professor of Food Microbiology*
 Joseph J. Warthesen, *Associate Professor of Food Chemistry*

A MAJOR IN FOOD SCIENCE AND TECHNOLOGY CAN BE COMPLETED IN THE EVENING. SEE PAGES 574 and 577.

Read about abbreviations, symbols, and maps on page 60.
 Courses and sections in red have limits on enrollment. See page 20.

FScN 1012 NUTRITION AND OUR FOOD SUPPLY. 4 degree credits, \$1010, \$148 plus \$5 course fee. Total \$153. (♦\$74 plus \$5 course fee. Total \$79)

Human nutritional requirements, basis of a balanced diet; diet and physical fitness in heart disease, obesity, cancer; food and diet fads; effect of processing and storage; additives, food safety, and FDA; future world food production problems and solutions. Individual one-week dietary survey required. (No prereq)

Spring Qtr Sec 1 **T**—6:15-9, MoosT 2-620, Addis

FScN 1603 FAMILY NUTRITION. 2 degree credits, \$74.

Basic concepts in nutrition, emphasizing interrelationships between nutrients and the human requirement for specific nutrients. Discussion on current controversial nutrition topics. Intended for nonmajors. (No prereq)

Fall Qtr Sec 1 **M**—6:15-8, ABLMS 125, StP Campus, Savaiano

FScN 3110 FOOD CHEMISTRY. 4 degree credits, \$195.

Structures, properties, reactions and functions of basic chemical components of foods. Chemical properties of food systems, influence of processing, storage, and preparation. (Prereq BioC 1302 or Biol 5001)

Fall Qtr Sec 1 **W**—6:15-9:30, ABLMS 125, StP Campus, Smith, Warthesen

★FScN 3112 FOOD CHEMISTRY LABORATORY. 2 degree credits, \$97.50.

Laboratory experiments to investigate chemical properties and reactions of selected food systems and food components. (Prereq 3110 or 13110. Limited to 16)

Fall Qtr Sec 1 **Th**—6:15-9:30, ABLMS 135, StP Campus

OFScN 3622 LIFECYCLE AND COMMUNITY NUTRITION. 4 degree credits, \$195 plus \$5 course fee. Total \$200.

Application of the principles of nutrition to meet the specific requirements of growth, development, adult maintenance and aging. Concepts and methodologies for application of nutrition principles to community nutrition practice. Consideration of community based nutrition-related services and resources and the public policy and governmental systems influencing them. Consideration of sociocultural factors affecting nutritional status. (Prereq 3272, 3472, 3600, physiology or human biology, or #. A joint Day/Extension class)

Winter Qtr Sec 1 **MW**—4-5:45, FScN 15, StP Campus

OFScN 5111 INDEPENDENT STUDY IN FOOD SCIENCE AND NUTRITION. 1-5 degree credits, \$48.75 per credit.

Individual laboratory or library research in an area related to food chemistry, food processing, and nutrition. Open to students in any college who wish to gain experience in the food science and nutrition area. (Prereq Δ. Call 373-1079 for more information. May be repeated for credit. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **Time arr.**

Winter Qtr Sec 2 **Time arr.**

Spring Qtr Sec 3 **Time arr.**

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

FScN 5120 FOOD MICROBIOLOGY. 5 degree credits, \$243.75.

Relationship of environment to occurrence, growth, and survival of microorganisms in foods; evaluation of microbiological quality of dairy and food products; characteristics and activities of bacteria, yeasts, and molds related to food spoilage; utilization of microorganisms in manufacture of dairy and food products; recognition and control of food-borne pathogens and food poisoning. (Prereq MicB 3103. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **TTh**—6:15-10, FScN 15, 218, StP Campus, Busta

FScN 5122 SANITATION AND CONTROL OF MICROORGANISMS. 2 degree credits, \$97.50.

Factors that influence the control and destruction of microorganisms; chemical, physical, and microbiological principles in cleaning and sanitizing food processing equipment; inactivation of microorganisms and thermal process evaluation, microbiological preservation methods; development of sanitation programs; microbiological criteria; hazard analysis and critical control point concept. (Prereq 5120 or #; ¶5123 advised, especially for food science and technology majors. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **T—Rec**, 8:15-10, FScN 218, StP Campus, Busta
Th—Lect, 7:45-9, FScN 15, StP Campus, Busta

FScN 5123 MICROBIOLOGY OF FOOD FERMENTATIONS. 2 degree credits, \$97.50.

Characteristics of bacteria, yeasts, and molds involved in dairy and food fermentations; properties of lactic bacteriophages and methods of control in dairy fermentations; composition and factors that influence activity of dairy and food starter cultures; microbiology of natural and controlled fermentations; use of microorganisms in production of single cell protein of products consumed as food, and in waste utilization. (Prereq 5120 or #; ¶5122 advised, especially for food science and technology majors. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **T—Lab**, 6:15-8, FScN 218, StP Campus
Th—Lect, 6:15-7:30, VetS 145, StP Campus, McKay

★FScN 5135 FOOD PROCESS ENGINEERING I. 4 degree credits, \$195.

Principles and applications of flow and rheology in Newtonian and non-Newtonian food systems; flow measurement; piping and pump sizing; separation principles (sedimentation, centrifugation, filtration). Principles and applications of forced and natural steady state heat transfer in food processing. (Prereq 1102 or ¶1102, Math 1142, Phys 1041-1042. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Fall Qtr Sec 1 **T**—6:15-10, FScN 15, StP Campus, Bakshi

★FScN 5136 FOOD PROCESS ENGINEERING II. 4 degree credits, \$195.

Engineering and processing principles and food system applications of (1) single and multi-stage evaporators, and (2) unsteady heat transfer (heating and cooling). Engineering and application of design and delivery of thermal processing. Freezing heat transfer principles and applications of humidification and leaching in food processes. (Prereq 5135. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Winter Qtr Sec 1 **W**—6:15-10, FScN 15, StP Campus, Bakshi

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★FScN 5312 **CHEMICAL AND INSTRUMENTAL ANALYSIS OF FOODS.** 5 degree credits, \$243.75.

Application of quantitative physical, chemical, and instrumental methods of analysis to the examination of food products; evaluation of methods and interpretation of results. (Prereq 3112, BioC 5025 or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 16)

Spring Qtr Sec 1 **TTh**—6:15-10, ABLMS 222, 135, StP Campus, Davis, Warthesen

★FScN 5350 **APPLICATION OF EXPERIMENTAL DESIGN IN THE FOOD INDUSTRY.** 4 degree credits, \$195 plus \$10 course fee. Total \$205.

Application of concepts and techniques of experimental design to the solution of food science problems. Case studies, computer programming and use emphasized. (Prereq course in statistics; lab hrs arr. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Spring Qtr Sec 1 **MW**—5-6:30, ABLMS 125, StP Campus, May

FScN 5380 **FOOD PACKAGING.** 3 degree credits, \$146.25 plus \$5 course fee. Total \$151.25.

Lecture and demonstration of the principles of packaging as they apply to foods and the food industry. (Prereq FScN 3110 and Phys 1032 or equivalent. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **T**—5:30-7:45, ABLMS 125, StP Campus, Clifford

FScN 5412 **PHYSICOCHEMISTRY OF FOODS.** 3 degree credits, \$146.25.

Characterization of crystalline systems, gels, emulsions, foams, and rheological systems; functionality of food macromolecules in these systems. (Prereq 3110. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **M**—6:30-9, FScN 15, StP Campus, Gordon

FScN 5523 **TECHNOLOGY OF FERMENTED DAIRY PRODUCTS.** 4 degree credits, \$195.

An integration of chemical, microbiological, and physical principles involved in the manufacture and storage of cheeses and fermented milks. (Prereq 3112, 5123. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **W**—6-9:45, FScN 15, 150, StP Campus, Morris

⊙FScN 5524 **SENSORY EVALUATION OF DAIRY PRODUCTS.** 1 degree credit, \$48.75.

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 3110 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **Th**—5:30-7:30, FScN 157, StP Campus, Smith

⊙FScN 5555 **FREEZING AND DEHYDRATION OF FOODS.** 5 degree credits, \$243.75.

Principles involved in the processing, handling, and storage of frozen, dry, and intermediate moisture foods with emphasis on the physicochemical properties of water in foods. (Prereq 3110, 5120, 5135 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **TTh**—4-6:30, ABLMS 125, StP Campus, Labuza

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

FScN 5600 NUTRITION SEMINAR. 1 degree credit, \$48.75.

Literature review and presentation of papers in selected areas of nutrition. (Prereq sr or #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Arr**, Hanson
Spring Qtr Sec 2 **Arr**, Hanson

FScN 5622 MACRO-NUTRIENT METABOLISM. 4 degree credits, \$195.

Physiological function and metabolic fate of carbohydrates, lipids, and proteins, and their involvement in fulfilling energy needs for maintenance, growth, and work. (Prereq 3600, Biol 5001, Phsl 3051 or #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **T**—6:30-10, AnSciVM 125, StP Campus, S Clarke

OFScN 5624 METABOLIC APPROACH TO CLINICAL NUTRITION. 4 degree credits, \$195.

Focussing on the individual human in the clinical setting; the interaction of calorie deprivation, metabolic demands of illness, and nutritional implications of medical treatment are studied. (Prereq 5622, 5623. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **TTh**—6-7:30, ABLMS 125, StP Campus, Phinney

OFScN 5643 SEMINAR: WORLD FOOD SUPPLY PROBLEMS. 3 degree credits, \$AgEc 5790, \$Agro 5200, \$Soc 5675, \$LACS 5280, \$146.25.

A multidisciplinary approach to social, economic, and technical problems of feeding the world's growing population. (Prereq sr or grad student with #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Soc 5675. A joint Day/Extension class)

Fall Qtr Sec 1 **W**—6-9, ClaOff B35, StP Campus, Savaiano, Busta

FScN 5662 CLINICAL NUTRITION. 3 degree credits, \$146.25.

Application of principles of normal nutrition to clinical problems, with description of altered nutrient requirements in human disease. Nutritional therapy of common clinical conditions and the effects of treatment on the nutritional status of the patient. (Prereq 5622, Biol 3021 or #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **T**—6:30-8:45, St. Cloud, A Clarke

OFScN 5665 APPLIED CLINICAL NUTRITION I. 2 degree credits, \$97.50.

Description of fluid and electrolyte balance; common clinical tests; interrelationships of medications and nutrition. Description of diet therapies for common diseases of the gastrointestinal tract and selected acute medical conditions. (Prereq Biol 5001 or 15001; Phsl 3051 or 1002; LaMP 5177; Phcl 1009 or 11009 or demonstrated equivalent. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **Th**—4-5:45, AnScVM 125, StP Campus

OFScN 5666 APPLIED CLINICAL NUTRITION II. 2 degree credits, \$97.50.

Continuation of 5665. Description of the pathology, treatment, and diet therapy for diseases of the cardiovascular system and common diseases of the endocrine system,

(continued next page)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

notably diabetes mellitus. (Prereq 5665; 5622 or ¶5622; 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**—4-5:45, FScN 15, StP Campus

OFScN 5667 APPLIED CLINICAL NUTRITION III. 2 degree credits, \$97.50.

Continuation of 5666. Description of the pathology, treatment, and diet therapy in diseases of the kidney and urinary tract. Emphasis also upon therapeutic management of selected central nervous system disorders, inborn errors of metabolism, and allergies. Special nutritional considerations in care of geriatric patients with common pathological disorders. (Prereq 5665, 5666; or demonstrated equivalent. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **Th**—4-5:45, ABLMS 125, StP Campus

OFScN 5675 CLINICAL NUTRITION LABORATORY I. 1 degree credit, \$48.75.

Application of nutrition principles to clinical problems related to hypermetabolic conditions and gastrointestinal disorders. Techniques of nutritional assessment and planning. **Must be taken S-N.** (Prereq 5665 or ¶5665. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **W**—4-4:45, AnScVM 135, StP Campus

OFScN 5676 CLINICAL NUTRITION LABORATORY II. 1 degree credit, \$48.75.

Application of nutrition principles to clinical problems related to endocrine, cardiovascular, renal, and energy disorders. Techniques of diet calculation and patient education. **Must be taken S-N.** (Prereq 5666 or ¶5666. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **W**—4-4:45, ABLMS 222, StP Campus

FScN 8313 TOPICS IN LIPID CHEMISTRY. 2 degree credits, \$170.

Current evaluation of research and other topics relevant to lipid chemistry in food, animal and plant tissues, biological fluids and microorganisms, with special emphasis on free radicals, autoxidation, oxidative deterioration and antioxidant reactions. (Prereq BioC 5002 or #. Open only to students admitted to the University of Minnesota Graduate School)

Spring Qtr Sec 1 **W**—6:15-8, ABLMS 222, StP Campus, Csallany

Foreign Study (FoSt)

College of Liberal Arts

Textbooks are available at the Minnesota Book Center in Williamson Hall (373-3688)

(For information about SPAN—Student Project for Amity Among Nations—see page 425)

Theofanis Stavrou, Professor of History, Modern Greek Studies

FoSt 3001-3002-3003 LANGUAGE, CULTURE AND SOCIETY: MODERN GREEK. 5 degree credits each quarter, \$MdGk 1101-1102-1103, \$192.50 each quarter.

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

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

and society in Greece. The course is 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, FolH 108, Stavrou

Winter Qtr 3002 Sec 2 Th—6:20-8:50, FolH 108, Stavrou

Spring Qtr 3003 Sec 3 Th—6:20-8:50, FolH 108, Stavrou

FoSt 3004-3005-3006 LANGUAGE, CULTURE AND SOCIETY: INTERMEDIATE MODERN GREEK. 5 degree credits each quarter, \$MdGk 3104-3105-3106, \$192.50 each quarter.

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. (Prereq 3003 or equiv for 3004; 3004 or equiv for 3005; 3005 or equiv for 3006. Meets concurrently with MdGk 1104-3105-3106)

Fall Qtr 3004 Sec 1 M—6:20-8:50, FolH 108, Stavrou

Winter Qtr 3005 Sec 2 M—6:20-8:50, FolH 108, Stavrou

Spring Qtr 3006 Sec 3 M—6:20-8:50, FolH 108, Stavrou

Forest Products (ForP)

College of Forestry

Textbooks for most ForP courses are available at Books Underground on the St. Paul campus (373-0800).

No courses scheduled 1984-85.

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 376-3000 two weeks before mail registration for that quarter begins.

Forest Resources (FR)

College of Forestry

Roger T. Johnson, Associate Professor of Elementary Education
Alan R. Ek, Professor in Forest Resources

★**FR 5403 FUNDAMENTALS OF NATURAL RESOURCE EDUCATION.** 3 degree credits, \$155.25 plus \$5 course fee. Total \$160.25.

Intended for elementary teachers. Study of soil, water, forest and wildlife resources of Minnesota and the biological principles and ecological implications of management. Environmental issues developed through interactions of natural resource manipulation will be discussed; outdoor teaching skills in environmental education will be
(continued next page)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

experienced in a metropolitan center. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 36)

Fall Spec Sec 1 Fri., Oct. 12, 1984, 5:30-10

Term Sat., Oct. 13, 1984, 8:30 a.m.-5

Sun., Oct. 14, 1984, 8:30 a.m.-5

Mon., Nov. 5, 1984, 5-10

Wood Lake Nature Center, Richfield (66th and Lakeshore Drive) Johnson, Vogt
No late fee through Oct. 5

Spring Spec Sec 2 Fri., Apr. 12, 1985, 5:30-10

Term Sat., Apr. 13, 1985, 8:30 a.m.-5

Sun., Apr. 14, 1985, 8:30 a.m.-5

Mon., May 13, 1985, 5-10

Wood Lake Nature Center, Richfield (66th and Lakeshore Drive) Vogt
No late fee through Apr. 5

French (Fren)

College of Liberal Arts

Textbooks for most Fren courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

(See also Hist 3624, France from the Renaissance to Richelieu; and IC 0582, French for Travelers)

F.R.P. Akehurst, Professor of French

Jay Caplan, Assistant Professor of French

Tom Conley, Professor of French

Peter Robinson, Associate Professor of French

Joint Day/Extension Classes

You may register through Extension for certain 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 376-3000 two weeks before mail registration for that quarter begins.

BEGINNING FRENCH, Fren 1101-1102-1103 and INTERMEDIATE FRENCH, 1104-1105, stress pronunciation, aural comprehension, basic grammatical forms, patterns of French, and the ability to recombine them in new situations. Reading and writing skills will be developed as a complement to the acquisition of the spoken objectives.

Read about language laboratories on page 56.

The following nonlanguage classes may be applied toward the CLA second language requirement, Route II (see page 562): ArtH 3303, Fren 3601, 3602, Frlt 3604, Hist 3624, 5211, 5212, 5231.

★Fren 1101-1102-1103 BEGINNING FRENCH. 5 degree credits each quarter, \$185 each quarter. (IS)

Basic listening, speaking, reading and writing skills. Stress on communicative competence. Some cultural readings. (No prereq for 1101; 1101 or 1 year high
(continued next page))

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

school French or # for 1102; 1102 or 2 years high school French or # for 1103. Limited to 30)

- Fall Qtr 1101** Sec 1 **MTh**—6:20-8:25, FolH 205
 Sec 2 **MTh**—6:20-8:25, FolH 304
 Sec 3 **MTh**—6:20-8:25, FolH 305 (Limit 90)
 Sec 4 **T**—6:10-10:05, FolH 110
 Sec 5 **T**—6:10-10:05, FolH 205
 Sec 6 **T**—6:10-10:05, Arch 55 (Limit 90)
- Winter Qtr 1102** Sec 7 **MTh**—6:20-8:25, FolH 303
 Sec 8 **MTh**—6:20-8:25, FolH 304 (Limit 60)
 Sec 9 **T**—6:10-10:05, FolH 209
 Sec 10 **T**—6:10-10:05, FolH 303 (Limit 60)
- Spring Qtr 1103** Sec 11 **MTh**—6:20-8:25, Arch 15
 Sec 12 **MTh**—6:20-8:25, MinMet 120 (Limit 60)
 Sec 13 **T**—6:10-10:05, FolH 205
 Sec 14 **T**—6:10-10:05, FolH 304 (Limit 60)

OFren 1104 INTERMEDIATE FRENCH. 5 degree credits, \$185.

Discussion of literary and cultural readings. Grammar review and development of writing skills. (Prereq 1103 or #. A joint Day/Extension class)

Fall Sem Sec 1 **M**—6:20-9:15, FolH 204

Fren 1105 INTERMEDIATE FRENCH. 5 degree credits, \$185.

Cultural and literary readings, progressively less structured discussion leading to free expression of ideas through speaking and writing. (Prereq 1104 or #)

Spring Sem Sec 1 **M**—6:20-9:15, FolH 204

Fren 3015 FRENCH CONVERSATION AND COMPOSITION. 5 degree credits, \$192.50.

Emphasis on writing, development of communication skills, based on a consolidation of grammar. (Prereq 1105)

Fall Sem Sec 1 **T**—6:20-9:15, FolH 108

OFren 3016 ADVANCED FRENCH COMPOSITION AND CONVERSATION. 5 degree credits, \$192.50.

Builds on Fren 3015 with emphasis on aspects of expression and writing. Reading and discussion with attention to different cultural contexts. (Prereq 3015 or #. A joint Day/Extension class)

Spring Qtr Sec 1 **M**—6:20-9:15, FolH 107

★Fren 3020 BUSINESS FRENCH. 5 degree credits, \$192.50.

Intended to increase active command of the language, in particular the specialized vocabulary used in French business and industry. Recommended for students planning to use the language in a French milieu. (Prereq 3015. Limited to 30)

Spring Sem Sec 1 **W**—6:10-8:50, FolH 108

Fren 3601 FRENCH LITERATURE IN ENGLISH TRANSLATION. 5 degree credits, \$192.50. (♦\$96.25)

Representative works from medieval times to French Revolution—movements, genres, themes. (No prereq. May be applied toward the CLA second language requirement, Route II [see page 562])

Fall Qtr Sec 1 **W**—6:20-9:15, FolH 107

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Fren 3602 FRENCH LITERATURE IN ENGLISH TRANSLATION. 5 degree credits, \$192.50. (♦\$96.25)

Representative works from the French revolution to the present—movements, genre, themes. (No prereq. May be applied toward the CLA second language requirement, Route II [see page 562])

Spring Qtr Sec 1 **W**—6:20-9:15, FolH 107

Frlt 3604 CINEMAS OF THE REAL.

See French and Italian below.

Reading French

Fren 0001 READING FRENCH. No credit, \$148. (IS)

This course is designed solely to impart a basic reading knowledge of the French language; full time is devoted to intensive reading and translation of a variety of texts. Since this approach deals only with the reading aspect of the language, there are no sessions for oral-aural drills and composition, and great skill can be acquired in a short time. At the end of one quarter the student is given the graduate Reading Examination in French. The department will certify to the Graduate School a reading knowledge of French upon successful completion of this examination. (No prereq. **Must be taken S-N**)

Fall Qtr Sec 1 **M**—6:20-8:50, FolH 307

Sec 2 **T**—6:20-8:50, FordH 40

Winter Qtr Sec 3 **M**—6:20-8:50, FordH 40

Spring Qtr Sec 4 **M**—6:20-8:50, FolH 205

Fren 0001 is also offered as a Summer Extension Class.

SPRING QUARTER IN FRANCE

French Language and Culture Program in France: Spring quarter in France, cosponsored by the Department of French and Italian and Extension Classes Office of Study Abroad. Intensive French language instruction, culture courses and field trips. May apply to the CLA second language requirements (see page 562). (15 credits.) **For information:** call Extension Classes Office of Study Abroad at 376-5049.

French and Italian (Frlt)

College of Liberal Arts

Textbooks for most Frlt courses are available at the Minnesota Book Center in Williamson Hall.

Tom Conley, Professor of French

Joint Day/Extension Class

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 376-3000 two weeks before mail registration for that quarter begins.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

OFrIt 3604 CINEMAS OF THE REAL. 4 degree credits, \$154 plus \$10 course fee.
Total \$164.

Film works 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. May be applied toward the CLA second language requirement, Route II, for French and Italian [see page 562]. A joint Day/Extension class)

Winter Qtr Sec 1 M—6:10-8:30, NichH 45, Conley

G

General College (GC)

Textbooks for most GC courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

William Adamson, Associate Professor
Fred M. Amram, Professor
F. T. Benson, Professor
William Berens, Lecturer
Thomas Brothen, Associate Professor
Thomas Buckley, Professor
Alecia Buonocore, Instructor
Richard Byrne, Associate Professor
Terence Collins, Associate Professor
Douglas Dearden, Professor
Deborah Duoos, Lecturer
Robert L. Fjerstad, Lecturer
Sandra Flake, Associate Professor
John J. Flynn, Teaching Associate
David Foat, Instructor
William D. Foster, Lecturer
Robert Frazee, Lecturer
Joan Garfield, Assistant Professor
Jerome Gates, Professor
Mary Ellen Gee, Assistant Professor
Jill Gidmark, Associate Professor
David Giese, Professor
William Glew, Lecturer
Kenneth Goldfarb, Instructor
Thomas Graham, Lecturer
Sue Ann Guildermand, Lecturer
Evelyn Hansen, Professor
Jay Hatch, Assistant Professor
William Hathaway, Professor
Dennis Hower, Professor
Allen Johnson, Associate Professor
Peter Kahn, Assistant Professor
M. Barbara Killen, Associate Professor
Toyse Kyle, Instructor
Gail Koch, Associate Professor

Patrick Kroll, Associate Professor
Alex Kurak, Professor
Roger Larson, Professor
Sander Latts, Associate Professor
J. Mark Ludlow, Adjunct Assistant Professor
D. Long, Associate Professor
Margaret J. MacInnes, Professor
Joseph Marchesani, Lecturer
Phillip Marron, Lecturer
Carol Miller, Assistant Professor
Jeff Millikan, Lecturer
Norman Moen, Professor
Michael Moser, Teaching Specialist
Deborah Nelson, Assistant Professor
Mary K. Nelson, Assistant Professor
Thomas E. O'Toole, Lecturer
Sharon Patten, Assistant Professor,
Humphrey Institute of Public Affairs
Sheri Peterson Assistant Professor
Ivan M. Policoff, Associate Professor
Richard Pleus, Instructor
Douglas Robertson, Associate Professor
John Romano, Associate Professor
Robert Schommer, Lecturer
William Schwabacher, Professor
Thomas Skovholt, Associate Professor
Nathan Smith, Instructor
William Stockdale, Professor
Richard Uthe, Associate Professor
Cathrine Wambach, Lecturer
Neil A. Weikart, Lecturer
Gloria Wood, Assistant Professor
Robert Yahnke, Associate Professor
Candido Zanoni, Professor

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

As nearly as possible, General College Courses are planned to be complete in themselves. Emphasis is on relationships within and among fields of knowledge rather than intensive study of isolated segments. Most courses do not have prerequisites.

The Associate in Arts degree from the General College can be completed in Extension Classes (see page 555). New baccalaureate degree programs are explained in General College Baccalaureate Programs, page 556. See also General College Occupational Programs, and the Paralegal Program, available entirely or in part through Extension, which may be applied toward the General College degree program, pages 556-557. The "Aging Studies Program" is explained below.

Graduation Requirements—In most two-year institutions, the associate in arts degree is awarded to students who maintain a certain grade average and who complete courses distributed among the broad fields of the liberal arts. The General College requirement is similar in scope. The associate in arts degree is awarded to students presenting 90 passing credits, and passing the General College Degree Comprehensive Examination. In addition, the college requires that at least 60 of the 90 credits be distributed throughout the liberal arts and sciences.

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 376-3000 two weeks before mail registration for that quarter begins.

General College Categories

Aging Studies

An undergraduate certificate program offered through General College and Continuing Education and Extension. It is designed to train persons already working with older adults or those seeking to do so in such settings as nursing homes, senior centers, community outreach, hi-rises, congregate dining and the larger community. Students are provided with the knowledge, skills and attitudes needed to work with older persons. The social, psychological, and physical changes that occur with age are examined.

All courses in the Aging Studies Program are open to the general public with the exception of GC 3217, Community Service Internship. To be admitted into the program, application must be made during the Spring Quarter. For further information about application to the program, call or write Daniel Detzner, Coordinator of Aging Studies Program, University of Minnesota, 154 Nicholson Hall, 213 Pillsbury Drive S.E., Minneapolis, MN 55455. Telephone (612) 373-4988 or 373-3610.

- 1136 Biological Aspects of Aging
- 1287 Psychology Applied to Aging
- 3217 Community Service Internship
- 3238 Public Programs in Aging: Local, State, and National

Alternatives in Education

College For Working Adults

The General College and Minneapolis Community College have cooperatively developed a program for working adults to earn a college degree. Students can earn 12 or more credits per quarter, which is a full-time student load.

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

The Evening Baccalaureate is an option in the General College's third- and fourth-year day school curriculum. It consists of evening, media, and correspondence classes and programs for full-time employees who want to complete a four-year degree in a reasonably short period of time but cannot attend day school classes. The program is available to applicants with 90 transferable college credits. The program offers 1) courses two nights a week; 2) televised and/or individualized study and/or experimental learning components; 3) the possibility of completing 12 to 18 credits a quarter; and 4) faculty assistance in the planning of an individualized degree program.

Acquiring a degree is a demanding commitment in time and energy. The program is a unique approach to meet the needs of working adults. It is a flexible, realistic approach to quality education. For further information, call General College counseling, 376-2950.

1894 Planning a General College Baccalaureate Program

3823-3824-3825 Toward a Good Life: The Ideal

3826-3827-3828 Toward a Good Life: The Possible

3834-3835-3836 Conflict and Social Change

Artistic Expression

Also see the listing for MacPhail Center for the Arts

1300 Music Theory (MacPhail)

1301 Keyboard (MacPhail)

1302 Strings (MacPhail)

1303 Woodwinds, Brass, Percussion (MacPhail)

1304 Voice (MacPhail)

1305 Dance (MacPhail)

1306 Ensembles (MacPhail)

1307 Music History and Literature (MacPhail)

1311 General Arts

1331 Music: Instrumental Music and Its Traditions

1366 Literature: Images of Women in Literature

1481 Creativity: Art Lab—Experience in the Media

1485 Photography I

1486 Photography II

1487 Photography (MacPhail)

1506 Piano Tuning (MacPhail)

1536 Commercial Art for Nonprofessionals

3311 General Arts

3374 Film and Society

3377 Murder, Mystery, and Mayhem: Whodunit?

3823-3824-3825 Toward a Good Life

3826-3827-3828 Toward a Good Life

3834-3835-3836 Conflict and Social Change

3921-3922-3923 Energy and the Environment

Business Studies

Also see Professional Improvement Courses and Seminars

1235 United States: Law in Society

1454 Statistics

1511 Introduction to Modern Business

1513 Principles of Small Business Operations

1515 Orientation to Cooperative Internships

1517 Business Internship in Cooperative Education

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

- 1533 Financial Mathematics
- 1534 Practical Law
- 1535 Introduction to Data Processing
- 1537 Salesmanship
- 1540 Accounting Fundamentals I
- 1542 Accounting Fundamentals II
- 1551 Marketing: Introduction
- 1552 Marketing: Sales Promotion
- 1553 Marketing: Management
- 1764 Credits and Collections
- 3235 Poverty Law
- 3342 Moral Issues in Business
- 3454 Understanding Quantitative Research Methods
- 3514 Research for Starting A Small Business
- 3517 Business Internship in Cooperative Education
- 3560 Personnel Administration
- 3571 Computer Approach: Problem Solving
- 3602 Applied Supervision
- 3732 Consumer Transactions and the Law
- 3761 Consumer/Industrial Buyer Behavior
- 3763 Professional Sales Problems
- 3764 Credits and Collections Management

Communication Skills

- 1402 Communication Skills: Vocabulary Development
- 1403 Communication Skills: Reading, Comprehension, and Study Skills

The following courses are offered as individual study classes with tutorial assistance in the General College Reading/Writing Skills Center: 1401, 1409, 1411, 1412, 1417, 1429. The center is open from 8 a.m. to 8 p.m. Monday through Thursday, and from 8 a.m. to 3 p.m. Fridays. Students schedule one hour a week in the center for each credit enrolled. Arrange schedules for the quarter in Nicholson Hall 1 during the first week of classes.

- 1401 Improving Study Skills, Reading Comprehension, and Vocabulary
- 1402 Vocabulary Development
- 1403 Reading Comprehension, and Study Skills
- 1409 Communication Skills: Individual Study
- 1411 Communication Skills: Fundamentals of Usage and Style
- 1412 Writing Grammatical Sentences and Developing Organized Paragraphs
- 1417 Improving Spelling and Punctuation
- 1421 Writing Laboratory: Personal Writing
- 1422 Writing Laboratory: Communicating in Society
- 1429 Writing: Individual Study
- 1461 Oral Communication: Basic Principles
- 1464 Oral Communication: Group Process and Discussion
- 1465 Oral Communication: Interpersonal Communication
- 1471 Creativity: Creative Problem Solving—Innovation Techniques
- 3423 Writing the Research or Survey Report
- 3464 Communication in Organizations
- 3465 Communication for Health Workers
- 3484 Writing for Publication
- 3531 Writing for Business and the Professions
- 3532 Legal Writing

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Family Life Studies

- 1282 Psychology Applied to Human Affairs
- 1731 Home Life: Consumer Problems
- 3720 Violence in the Family
- 3726 Dynamics of Family Life

Legal Studies

Legal Assistant Program

The Legal Assistant Program, approved by the American Bar Association, combines general education, related business courses, specific training in legal specialty fields. General education requirements are waived for people already holding a bachelor's degree. Legal specialty courses are highly specialized courses taught by practicing attorneys. Only persons who have obtained written permission from the coordinator may register for these courses. For further information about application to the program and registration, call or write: Coordinator, Paralegal Program, University of Minnesota, 106 Nicholson Hall, 216 Pillsbury Drive S.E., Minneapolis, MN 55455 (373-4168 or 373-4104).

Your attention is called to GC 3531, and to the Legal Assistant Certificate, page 557.

- 3532 Legal Writing
- 3581 Legal Studies: Business Organizations
- 3582 Legal Studies: Real Estate
- 3583 Legal Studies: Estate Planning and Administration
- 3584 Legal Studies: Litigation and Trial Practice
- 3585 Legal Studies: Income Taxation
- 3586 Legal Studies: Legal Research
- 3587 Legal Studies: Legal Studies Internship
- 3592 Legal Studies: Domestic Relations
- 3593 Legal Studies: Law Office Administration
- 3594 Legal Studies: Computers in the Law Firm

Music, Dance, Speech at MacPhail Center

The following are categories of MacPhail courses. See page 252 for credit offerings. See page 521 for noncredit listings.

- 1300 Music Fundamentals and Theory
- 1301 Keyboard Performance
- 1302 Strings, Guitar, Harp
- 1303 Woodwinds, Brass, Percussion
- 1304 Voice and Choral
- 1305 Dance
- 1506 Piano Tuning

Marketing

The Marketing Certificate

The Marketing Certificate Program combines general education courses with marketing and other related business courses for students interested in pursuing a career in a business field. Successful completion of the program leads to the granting of a Marketing Certificate, which represents 66-72 credits in business courses plus the balance of required credits in general education courses for a total of approximately 90 credits. With appropriate planning, the

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

certificate may be incorporated into the General College's Associate in Arts, Bachelor of Applied Studies, or Bachelor of General Studies degree programs.

During the first year students complete the prerequisite courses as well as a portion of the general education distribution requirements. During the second year, students complete the remaining general education requirements and the specialty business courses.

For complete information about the marketing certificate program, see page 558 in the General College degrees section of this Bulletin.

Students wishing to apply for the marketing program should contact Professor Shari Peterson at 373-5244, 106 Nicholson Hall, University of Minnesota, 216 Pillsbury Dr. S.E., Minneapolis, MN 55455. Applications are accepted during May.

- 1551 Marketing: Introduction
- 1552 Marketing: Sales Promotion
- 1553 Marketing: Management
- 3761 Consumer/Industrial Buyer Behavior

Mathematical Studies

- 1433 Basic Mathematics
- 1445 Mathematics: Intermediate Algebra
- 1454 Statistics
- 1533 Financial Mathematics: Procedures and Applications
- 3454 Understanding Quantitative Research Methods
- 3571 Computer Approach: Problem Solving

Minnesota, the Nation, and the World

- 1221 Minnesota History
- 1230 U.S.: Recent History
- 3823-3824-3825 Toward a Good Life
- 3826-3827-3828 Toward a Good Life
- 3834-3835-3836 Conflict and Social Change
- 3841 Minnesota Resources

Natural Science

- 1111 Science in Context: Weather and Climate
- 1112 Science in Context: Human Uses of the Environment
- 1132 Biological Science: The Human Body
- 1133 Nature Study
- 1161 Physical Science: Astronomy—Solar System
- 1166 Physical Science: Principles of Chemistry
- 1167 Amateur Astronomy Lab
- 3114 Personal Environmental Health
- 3115 Evolution and the Modern Species
- 3132 Human Body: Cardiovascular Anatomy and Physiology
- 3134 Nature and Its Impact on the Mind
- 3823-3824-3825 Toward a Good Life
- 3826-3827-3828 Toward a Good Life
- 3834-3835-3836 Conflict and Social Change
- 3841 Minnesota Resources

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Psychology in Human Services

- 1282 Psychology Applied to Human Affairs
- 1283 Psychology of Human Development
- 1287 Psychology Applied to Aging
- 1502 Career Planning
- 1705 Psychology and the Management of Stress
- 3217 Community Service Internship
- 3282 Psychology Applied to Social Problems
- 3605 Interviewing
- 3612 Mental Health: Principles and Practices
- 3642 Small Group Facilitation

Social Issues

- 1212 Urban Problems
- 1292 Natural Resources: Their Utilization and Management
- 1442 Functions and Problems of Logic
- 3238 Public Programs in Aging: National, State, Local
- 3285 Anthropology of the City
- 3292 Urban Decision Making in the Twin Cities
- 3344 Moral Issues in Medical and Health Professions
- 3345 Morality and the Law
- 3376 Humanities: The Experience of Aging

General College Course Descriptions

(Listed in numerical order)

- ★GC 1111 **SCIENCE IN CONTEXT: WEATHER AND CLIMATE.** 4 degree credits, \$148.
(♦\$74)

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, Irondale HS 310, New Brighton, A Johnson

- GC 1112 **SCIENCE IN CONTEXT: HUMAN USES OF THE ENVIRONMENT.** 5 degree credits, \$1113, \$185 (♦\$92.50)

Study of ecology as applied to aspects of our past, present, and future existence; application of biological principles and interrelationships between the individual and the environment. Principles of ecology as seen in structure and function of ecosystem; pollution of soil, water, and air resources; population explosion; and relationship of people, disease, food production, environmental controls to survive. (No prereq)

Fall Qtr Sec 1 **M**—6:10-8:40, SciCB 175, Hatch

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

GC 1132 BIOLOGICAL SCIENCE: THE HUMAN BODY. 4 degree credits, \$148. (◆\$74)

Problems of physical, mental, and social health are related to anatomy, physiology, and needs of the human organism. In studying the heart, for example, instructor shows what it is, how it works, its importance to overall functioning of the body, what can go wrong with it, and what is known about keeping it on the job. Films, televised dissections, and demonstrations supplement lectures. (No prereq)

Fall Qtr Sec 1 **W**—6:10-8:40, SciCB 125

Winter Qtr Sec 2 **M**—6:20-8:50, SciCB 125

(See also Anatomy; Physiology; Biology; and GC 3132, Cardiovascular Anatomy and Physiology)

★GC 1133 NATURE STUDY. 4 degree credits, \$148.

Greater appreciation and enjoyment of wild plants and animals in their natural environment. Techniques of giving field instruction to groups of children and adults interested in nature. Identification, behavior, and relationships of living things. Individual projects may be assigned, such as writing nature poetry; drawing, sketching, or painting plants and animals; studying life histories of plants and animals; cultivating house plants; and collecting insects or leaves. Lectures, laboratories, and some Saturday field trips. (No prereq. Limited to 30)

Spring Qtr Sec 1 **W**—6:10-8:40, ApH 245, Hatch

(See also Informal Courses)

GC 1136 BIOLOGICAL ASPECTS OF AGING. 4 degree credits, \$148. (◆\$74)

An overview of the biological changes that occur with age, including a discussion of normal aging, common physical problems, diseases of the aged, drugs, preventive health care, the "activated patient" role, and the limits of intervention. (No prereq)

Winter Qtr Sec 1 **Th**—6:10-8:40, SciCB 125, Dearden

GC 1161 PHYSICAL SCIENCE: ASTRONOMY—SOLAR SYSTEM. 4 degree credits, \$148. (◆\$74) (IS)

Introductory survey of solar system including earth, sun, planets, satellites, asteroids, comets, and meteorites. Proofs of earth's rotation and revolution, celestial sphere, time intervals, motions and physical attributes of various members of solar system, and instruments used by astronomer. Visit to planetarium; observation of sky through University telescope. (No prereq)

Winter Qtr Sec 1 **M**—6:20-8:50, Phys 131, Policoff

GC 1166 PHYSICAL SCIENCE: PRINCIPLES OF CHEMISTRY. 5 degree credits, \$185. (◆\$92.50) (IS)

Fundamental principles and laws selected for study, stressing development and application of theories and their roots in experience. Topics and demonstrations include classification of matter, reactions, elements, atomic and molecular structure, chemical bonding theory, and other subjects that may vary from quarter to quarter. Students gain general understanding of both content and process of the science of chemistry. (No prereq)

Fall Qtr Sec 1 **TTh**—6:30-8:30, SciCB 175

Spring Qtr Sec 2 **TTh**—6:30-8:30, SciCB 175, Uthe

★GC 1167 AMATEUR ASTRONOMY LAB. 4 degree credits, \$148.

Students will learn techniques of using amateur telescopes in systematically viewing the night sky and will perform a series of experiments, some of which include

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astrophotography. Instructors are members of the Twin Cities Astronomy Club. The class will also meet one or two Saturday nights. Time arr. (Prereq one course in astronomy or concurrent registration in an astronomy course or equivalent. A joint Day/Extension class limited to 25 Extension students)

Fall Qtr Sec 1 **Th**—7-11, Ph 131, Policoff

★GC 1212 URBAN PROBLEMS. 4 degree credits, \$148.

Using problem-solving, interdisciplinary approach, students examine some major urban problems such as social class and poverty, social change, crime, and education. Emphasizes practical activities through fieldwork or community activities. (No prereq. Limited to 50)

Winter Qtr Sec 1 **Th**—6:10-8:40, NichH 109, N Smith

GC 1221 MINNESOTA: HISTORY. 4 degree credits, \$1223, 1224, \$148. (IS)

Introduction to people and institutions of the state: geography, exploration, frontier settlement, statehood, economic development, politics, and social and intellectual history. (No prereq)

Fall Qtr Sec 1 **M**—6-8:40, NichH 213, Moen

GC 1230 UNITED STATES: RECENT HISTORY. 4 degree credits, \$148.

20th-century American history from a pluralistic point of view; lives of minority and bypassed citizens as well as those of leaders and members of dominant groups. Values Americans generally believe should shape personal and public affairs; extent of central government responsibility for economic well-being of the people; U.S. role in world affairs. (No prereq)

Spring Qtr Sec 1 **M**—6:10-8:40, NichH 213, Moen

★GC 1235 UNITED STATES: LAW IN SOCIETY. 4 degree credits, \$148. (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. (Limited to 40)

Fall Qtr Sec 1 **W**—5-7:30, JonesH 4, Hower

Winter Qtr Sec 2 **W**—5-7:30, JonesH 4, Hower

Spring Qtr Sec 3 **Th**—5-7:30, JonesH 4, Hower

GC 1282 PSYCHOLOGY APPLIED TO HUMAN AFFAIRS. 4 degree credits, \$148. (◆\$74)

How psychological principles and practices affect our daily lives. Examines the methods and findings of behavioral science in the study of everyday human affairs. Surveys the contributions of psychology to such fields of human experience as law and crime; behavior in unusual environments; personnel selection and training in industry; worker efficiency and job satisfaction; consumer behavior and advertising; teaching and learning; mental health; and accidents and driving safety. (No prereq)

Fall Qtr Sec 1 **Th**—6:10-8:40, NichH 109, Brothen

GC1283 PSYCHOLOGY OF HUMAN DEVELOPMENT. 4 degree credits, \$148 (◆\$74) (IS)

Focuses on growth and development of individual from conception through old age. Physical, motor, social, emotional, and psychological growth, and cognitive
(continued next page)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

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)

Fall Qtr Sec 1 M—6:10-8:40, NichH 207, Latts

★GC 1287 **PSYCHOLOGY APPLIED TO AGING.** 4 degree credits, \$148.

Course designed to serve as an introduction to the psychology of aging. It is a psychological analysis of aging, the aged person, and society's role in the aging process. Topics to be explored are: how people react to the aged, how people respond to their own aging, and how people respond as they are aging. Specific areas of study include mental health and aging, societal norms and aging, loneliness and aging, and psychological functioning of the aged person. (No prereq. Limited to 50)

Winter Qtr Sec 1 W—6:10-8:40, NichH 109, Brothen

⊙GC 1292 **NATURAL RESOURCES, THEIR UTILIZATION AND MANAGEMENT.** 4 degree credits, \$148.

The physical environment has many resources that can be utilized for the necessities and enjoyment of life. If these resources are to be available in the future, they must be managed appropriately. This course provides an opportunity to study the characteristics, geographic patterns, and management of land, water, soil, minerals, grasslands, forests and wildlife in both Minnesota and the United States. Environmental problems, such as air and water pollution, acid rain, and energy use may be considered from regional, national, and world perspectives. The course provides a basis for intelligent decision making by citizens. Guest speakers and films are included. (No prereq. A joint Day/Extension class)

Winter Qtr Sec 1 M—5:30-8, NichH 213, Flynn

GC 1300 **MUSIC THEORY.** See page 252.

GC 1301 **KEYBOARD.** See page 252.

GC 1302 **STRINGS.** See page 252.

GC 1303 **WOODWINDS, BRASS, PERCUSSION.** See page 253.

GC 1304 **VOICE.** See page 253.

GC 1305 **DANCE.** See page 253.

GC 1306 **ENSEMBLES.** See page 253.

GC 1307 **MUSIC HISTORY AND LITERATURE.** See page 253.

GC 1311 **GENERAL ARTS.** 4 degree credits, \$3311, \$148. (◆\$74) (IS)

Examines representative works of art from genres of painting, sculpture, architecture, literature, and music to discover how and why art is created and to enable students to formulate and evaluate ideas and attitudes about it. (No prereq. Meets concurrently with 3311)

Winter Qtr Sec 1 Th—6:20-8:50, NichH 111, Byrne

GC 1331 **MUSIC: INSTRUMENTAL MUSIC AND ITS TRADITIONS.** 4 degree credits, \$148. (◆\$74)

"Listening awareness" developed through acquaintance with sound of orchestral instruments, traditional means of organizing music, and representative works of some major composers. (No prereq)

Fall Qtr Sec 1 M—5-7:30, NichH 111, Byrne

See also Radio Course, GC 1363, Literature for Children, page 551.

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

GC 1366 LITERATURE: IMAGES OF WOMEN IN LITERATURE. 5 degree credits, \$185.
(♦\$92.50)

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)

Fall Qtr Sec 1 **T**—6:20-8:50, NichH 122, Miller

(See also WoSt 3103, The Modern Feminist Novel)

GC 1401 See boxed below.

★GC 1402 VOCABULARY DEVELOPMENT. 3 degree credits, \$111. (IS)

In-class discussion, small-group work, and individual projects. Students develop substantial and workable vocabulary through study of dictionary, word parts, and meanings in context in programmed textbooks, current college textbooks, and individually compiled contextual passages. Both written and oral classwork. (No prereq. Limited to 30)

Fall Qtr Sec 1 **M**—5-7:30, NichH 209A, Kurak

★GC 1403 READING, COMPREHENSION, AND STUDY SKILLS. 3 degree credits, \$111.

Physical and mental skills involved in helping students comprehend, retain, and evaluate what they read and in enabling them to read at adequate rate of speed. Basic textbook, machines, tapes, and timed readings provide practice in reading for factual information, main ideas, concepts, and implications. Work by whole-class method, in small groups, and individually. (No prereq. Limited to 18)

Winter Qtr Sec 1 **T**—5-7:30, NichH 201

READING/WRITING SKILLS CENTER COURSES:

The following courses are offered as individual study classes with tutorial assistance in the General College Reading/Writing Skills Center. **The center is open from 8 a.m. to 8 p.m. Monday through Thursday, and from 8 a.m. to 3 p.m. Fridays. Students schedule one hour a week in the center for each credit enrolled.** Arrange schedules for the quarter in Nicholson Hall 1 during the first week of classes.

GC 1401 IMPROVING STUDY SKILLS, READING COMPREHENSION, AND VOCABULARY. 1-3 degree credits, \$37 a credit.

Students acquire techniques in study skills of budgeting time efficiently; previewing, reviewing, and studying textbooks; memorizing; taking notes; organizing material; studying for tests. They learn techniques for recognizing main ideas, retaining facts, and recognizing relationships of thoughts from their reading. They practice vocabulary-building methods through use of basic word parts, words in context, and vocabulary of specific subject-matter areas. Work is mainly through programmed and other self-help methods, with periodic tutorial conferences and tests to measure progress and achievement. (No prereq)

Fall Qtr Sec 1 **Time Arr.**, NichH 1, Flake

Winter Qtr Sec 2 **Time Arr.**, NichH 1, Gee

Spring Qtr Sec 3 **Time Arr.**, NichH 1, Flake

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

GC 1409 COMMUNICATION SKILLS: INDIVIDUAL STUDY. 2 degree credits, \$74.

This independent study course is designed to assist students on an individual basis with projects or papers relating directly to work students are doing in other courses being taken concurrently. The project will be determined by the student and a staff member of the General College Reading and Writing Skills Center, NichH 1. Students may consult with a staff member any open hours, Monday through Friday (see note above). (No prereq)

Fall Qtr Sec 1 **Time Arr.** NichH 1, Flake

Winter Qtr Sec 2 **Time Arr.** NichH 1, Gee

Spring Qtr Sec 3 **Time Arr.** NichH 1, Flake

GC 1411 FUNDAMENTALS OF USAGE AND STYLE. 3 degree credits, \$1405, \$111.

Students practice principles of grammar, usage and style through exercises and writing sentences and paragraphs. (No prereq)

Fall Qtr Sec 1 **Time Arr.**, NichH 1, Flake

Winter Qtr Sec 2 **Time Arr.**, NichH 1, Gee

Spring Qtr Sec 3 **Time Arr.**, NichH 1, Flake

GC 1412 WRITING GRAMMATICAL SENTENCES AND DEVELOPING ORGANIZED PARAGRAPHS. 1 or 2 degree credits, \$37 a credit.

Work on sentence problems to develop style that is grammatically correct and structurally flexible and complex. Work on paragraph problems and practice in various patterns for writing organized paragraphs. (No prereq)

Fall Qtr Sec 1 **Time Arr.**, NichH 1, Flake

Winter Qtr Sec 2 **Time Arr.**, NichH 1, Gee

Spring Qtr Sec 3 **Time Arr.**, NichH 1, Flake

GC 1417 IMPROVING SPELLING AND PUNCTUATION. 1 or 2 degree credits, \$37 a credit.

Programs in spelling and punctuation adapted to needs of individual students. Diagnostic pre-testing to determine specific problems for each student. Improvement of spelling and punctuation through completion of individualized exercises and/or programmed-learning sequences. Post-testing to measure improvement in each student's spelling or punctuation. (No prereq)

Fall Qtr Sec 1 **Time Arr.**, NichH 1, Flake

Winter Qtr Sec 2 **Time Arr.**, NichH 1, Gee

Spring Qtr Sec 3 **Time Arr.**, NichH 1, Flake

GC 1429 WRITING: INDIVIDUAL STUDY. 2 degree credits, \$74.

An independent study course for students wishing to undertake special writing projects. The project will be determined by the student and a staff member of the General College Reading and Writing Skills Center, NichH 1. Students may consult with a staff member any open hours, Monday through Friday (see note above). (No prereq)

Fall Qtr Sec 1 **Time Arr.** NichH 1, Flake

Winter Qtr Sec 2 **Time Arr.** NichH 1, Gee

Spring Qtr Sec 3 **Time Arr.** NichH 1, Flake

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

★GC 1421 WRITING LABORATORY: PERSONAL WRITING. 4 degree credits, \$148.
 Students read and write descriptive narratives, characterizations, and autobiographical sketches. Personal help with individual writing problems. Emphasis is on clear and effective written expression. (No prereq. Limited to 25)

Fall Qtr Sec 1 **W**—6:20-8:50, NichH 209, Stockdale
Winter Qtr Sec 2 **Th**—6:20-8:50, NichH 216, Stockdale
Spring Qtr Sec 3 **W**—6:20-8:50, NichH 122, Stockdale

★GC 1422 WRITING LABORATORY: COMMUNICATING IN SOCIETY. 4 degree credits, \$1423, \$148.

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. (Prereq 1421 or #. Limited to 25)

Spring Qtr Sec 1 **T**—6:20-8:50, NichH 216

GC 1421 and GC 1422 (with a grade of C-7 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 Extension Counseling, 373-3905. Students in other colleges at the University should seek further information in the Composition section of this bulletin.

GC 1429 WRITING: INDIVIDUAL STUDY. See boxed above following GC 1417.

★GC 1433 BASIC MATHEMATICS. 4 degree credits, \$148.

For students who have a limited background in basic mathematics and who would like to study arithmetic and/or elementary algebra at their own pace in a lecture/semi-programmed class. (Although students register for 4 credits, additional credits up to a maximum of 10 may be earned during the quarter with the approval of the instructor.) With the aid of the instructor, students select topics to be studied from arithmetic (whole numbers, fractions, decimals, percents, and measurement) and elementary algebra. Two weeks after the end of the quarter, students who have completed more than 4 credits during the quarter should come in to the 101 Wesbrook Hall Registration Office to register and pay for the additional credits they have earned during that quarter. (No prereq. Limited to 45)

Fall Qtr Sec 1 **T**—6:10-9:10, FolH 101
Winter Qtr Sec 2 **T**—5:30-8:30, FolH 101
Spring Qtr Sec 3 **T**—6:10-9:10, FolH 101

GC 1442 FUNCTIONS AND PROBLEMS OF LOGIC. 4 degree credits, \$148 (♦\$74)

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)

CEW **Spring Qtr** Sec 1 **Th**—9:30 a.m.-12, MacP, Zaroni
Offered through Continuing Education for Women

★GC 1445 MATHEMATICS: INTERMEDIATE ALGEBRA. 5 degree credits, \$185. (IS)

Concepts and manipulative skills of algebra necessary for students to compete in a college algebra course. Topics include discussion of real number system, special
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products and factoring, exponents and radicals, linear equations in one and two variables, quadratic equations in one variable, progressions, inequalities, variation, and logarithms. Prospective student may have to give evidence of adequate preparation. (Prereq 1 yr high school algebra or good working knowledge of elementary algebra. Offered through Extension Classes in cooperation with Continuing Education for Women, limited to 38 Extension students)

Fall Qtr Sec 1 **MW**—6:30-8:30, FolH 102

Spring Qtr Sec 2 **MW**—6:30-8:30, FolH 102

★GC 1454 STATISTICS. 4 degree credits, \$148.

Introduction to modern statistics, emphasizing problem solving through statistical decision making. Topics include organization and presentation of data, summary statistics, sampling, probability, distributions, simple estimation, and tests of hypotheses. Data presented acquaint students with wide applicability of statistics. Attention is drawn to limitations of methods of presentation. Requires only a working knowledge of arithmetical skills. (No prereq. Limited to 40)

Fall Qtr Sec 1 **Th**—6:20-8:50, FolH 102, Garfield

Winter Qtr Sec 2 **W**—5:30-8, FolH 102, Garfield

GC 1461 ORAL COMMUNICATION: BASIC PRINCIPLES. 5 degree credits, \$185.
(♦\$92.50)

Various uses to which people put speech and basic biological, psychological, and social needs these uses are intended to satisfy. In conversations, discussions, and prepared speeches, students share ideas, attitudes, and experiences with others; investigate pervasiveness and function of communication in modern life; and examine how language functions as means of communication. Students listen and respond to communication of others and comment on what they see, hear, and feel. (No prereq)

Fall Qtr Sec 1 **Th**—5-7:30, NichH 122, D Nelson

GC 1464 ORAL COMMUNICATION: GROUP PROCESS AND DISCUSSION. 4 degree credits, \$148. (♦\$74)

Nature of groups, how they form and function, what purpose they serve in our society, and how leadership and other role behaviors emerge from their structure. Variety of group projects, activities, and discussions. (No prereq)

Spring Qtr Sec 1 **W**—5-7:30, NichH 107, Kyle

Gc 1465 ORAL COMMUNICATION: INTERPERSONAL COMMUNICATION. 4 degree credits, \$148 (♦\$74)

Students examine their own communication patterns—verbal, nonverbal, and vocal—and try to discover why they are effective or ineffective communicators, to uncover some origins of their communicative behavior, and to understand means we use to relate to each other and ways we alienate ourselves from each other. Course asks students to begin or deepen their search for identity and to aid others in their search. Students apprehensive about the "personal" dimension should not take this course. (No prereq)

Winter Qtr Sec 1 **M**—6:20-8:50, NichH 107, Benson

GC 1471 CREATIVITY: CREATIVE PROBLEM SOLVING—INNOVATION TECHNIQUES. 4 degree credits, \$148.

To heighten awareness of problems and challenges in academic and personal life, students solve problems in an open and trusting environment and become aware of
(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

their creative potential. Working individually or in groups, students use innovative techniques to help them perceive and approach problems flexibly and imaginatively. Readings and class exercises. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, NichH 111, Benson

GC 1481 CREATIVITY: ART LABORATORY—EXPERIENCES IN THE MEDIA. 3 degree credits (maximum 9 cr), \$111.

Opportunity for creative experiences in number of art media. Laboratory planned and operated to meet individual needs and interests of students and to provide means to develop creative awareness and ability. Includes reading assignments, lectures, and gallery trips. (No prereq)

Spring Qtr Sec 1 **Th**—5-7:30, NichH 102, Gates

★GC 1485 PHOTOGRAPHY I. 4 degree credits, \$148 plus \$25 course fee and \$5 special fee. Total \$178.

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 (373-3688). (No prereq. **Students must have a camera; a 35 mm camera is preferred, although not required.** Limited to 24).

Fall Qtr Sec 1 **W**—6-10, MacP 31, Millikan

Winter Qtr Sec 2 **M**—6-10, MacP 31, Millikan

Spring Qtr Sec 3 **Sa**—8 a.m.-12, MacP 31, Millikan

(See also IC 0106, Photo Workshop I)

★GC 1486 PHOTOGRAPHY II. 4 degree credits, \$148 plus \$15 course fee. Total \$163.

For students with previous experience in developing and printing. Discussion of photographic history, continued work with the black and white processes and some nonsilver media. Emphasis on exploration of students' own photographic sensibilities. Books available at the bookstore in Williamson Hall (373-3688). (Prereq 1485 or #. **Students must have a camera; a 35mm camera is preferred, although not required.** Limited to 24).

Spring Qtr Sec 1 **W**—6-10, MacP 31, Millikan

GC 1487 PHOTOGRAPHY. See page 253.

★GC 1502 CAREER PLANNING. 2 degree credits, \$74 plus \$5 course fee. Total \$79.

Career workshop designed to assess a student's interests, abilities, needs, values, and personality through testing and subjective self-exploration. Use of occupational information. For students who are undecided about their future career choice and those who need to confirm a tentative career choice. (No prereq. Limited to 20)

Fall Qtr Sec 1 **Th**—6:10-8:10, NichH 209A, Wood

GC 1506 PIANO TUNING AND REPAIR. See page 253.

★GC 1511 INTRODUCTION TO MODERN BUSINESS. 4 degree credits, \$148. (IS)

This course provides an overview of the economic environment in which business operates. The major functions of a business organization are surveyed including production, finance, personnel and marketing. A useful introductory course for students planning to do more work in business; also is recommended for those who want to survey the field without study in detail. (No prereq. Limited to 40)

Fall Qtr Sec 1 **T**—5:30-8, JonesH 4

Winter Qtr Sec 2 **T**—5-7:30, JonesH 4

Spring Qtr Sec 3 **T**—6:20-8:50, JonesH 4

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★GC 1513 **PRINCIPLES OF SMALL BUSINESS OPERATIONS.** 5 degree credits, \$185. (IS)

Designed specifically for those who plan to own or operate some form of small business, this course deals with the following topics: environment and management of the small business; problems of initiating the business; financial and administrative control; marketing program and policies; and legal and governmental relationship. (No prereq. Limited to 40)

Fall Qtr Sec 1 W—6:10-8:40, JonesH 10

Winter Qtr Sec 2 Th—5:30-8, JonesH 4

Sec 3 W—1:30-4, MacP, MK Nelson

Offered through Continuing Education for Women

Spring Qtr Sec 4 Th—5:30-8, JonesH 11

cew

★OGC 1515 **ORIENTATION TO COOPERATIVE INTERNSHIPS.** 3 degree credits, \$111.

A pre-employment class for students interested in business positions related to their area of study. In the weekly seminars students polish their job skills; locate appropriate work sites; write career goals; develop decision making, problem solving, and communication skills used in a business setting. Students then may be eligible for one of the on-the-job experiences (see GC 1517, 3517). **Must be taken S-N.** For further information, contact the Office of Cooperative Education, EltH N387, General College, 373-5243. (Prereq at least 45 cr. A joint Day/Extension class limited to 20 Extension students)

Fall Qtr Sec 1 Th—5-7:30, JonesH 11

Winter Qtr Sec 2 Th—5-7:30, JonesH 11

Spring Qtr Sec 3 Th—5-7:30, JonesH 11

★OGC 1517 **COOPERATIVE BUSINESS INTERNSHIPS.** 4 degree credits, \$148.

A course to enrich the student's education by combining classroom learning with work experience in the student's area of study. Students work a minimum of 15 hours a week allowing them to explore possible careers and gain first-hand knowledge of the academic programs necessary to prepare for successful transitions into careers. Work sites appropriate to the student's educational development are generated by the Office of Cooperative Education, or during the orientation class, GC 1515, students may request placement in jobs they already hold. **Must be taken S-N.** For further information, contact the Office of Cooperative Education, General College, Elliott Hall N387, 373-5243. (Prereq 1515 and written #. Meets concurrently with 3517. A joint Day/Extension class limited to a combined total of 20 Extension students)

Winter Qtr Sec 1 W—5-7:30, JonesH 10

Spring Qtr Sec 2 W—5-7:30, JonesH 4

GC 1530 **FUNDAMENTALS OF FINANCIAL ADMINISTRATION.** 4 degree credits. **Tentatively scheduled for 1985-86.**

GC 1533 **FINANCIAL MATHEMATICS: PROCEDURES AND APPLICATIONS.** 4 degree credits, \$148.

Using only basic mathematical skills, students solve problems with percentages, simple interest and discount, compound interest, annuities, corporate securities, and depreciation. Through study of practical business situations, students develop calculation skills to assist them in dealing with various financial problems. (No prereq)

Fall Qtr Sec 1 W—6-8:30, NichH 207, Long

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★GC 1534 PRACTICAL LAW. 4 degree credits, \$148. (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 T—6:20-8:50, NichH 207, Kahn

Winter Qtr Sec 2 M—6-8:30, JonesH 4, Kahn

Spring Qtr Sec 3 W—5-7:30, JonesH 10, Kahn

(See also Business Law; Informal Courses; Soc 3102, Introduction to Criminal Behavior and Social Control; and WoSt 5311, Women and the Law)

★GC 1535 INTRODUCTION TO DATA PROCESSING. 4 degree credits, \$148 plus \$5 course fee. Total \$153. (IS)

Basic aspects of data processing. Useful to students interested in computer programming or data processing. Includes the history of data processing, current equipment, computer language and operating systems, computer-related number systems, applications in various disciplines, social and economic effects, and career opportunities. Students learn BASIC in order to understand current information processing concepts and procedures. Opportunity to use computer. (No prereq. Limited to 45)

Fall Qtr Sec 1 M—6:10-8:40, ApH 150, Giese

Sec 2 Th—9:30 a.m.-12, MacP, Giese

Offered through Continuing Education for Women

Winter Qtr Sec 3 Th—6:10-8:40, ApH 150, Giese

Spring Qtr Sec 4 T—6:10-8:40, ApH 150, Giese

(See also IC 0594, Computing: What Is It?)

★GC 1536 COMMERCIAL ART FOR NONPROFESSIONALS. 4 degree credits each quarter (maximum 9 cr), \$148 each quarter.

A course for anyone whose job or other activities require some knowledge of and competence in the basic commercial art techniques. Course projects include design and preparation of newsletters, mailers, flyers, posters, and small ads. Techniques include layout and keylining, hand lettering, and use of cold type. Type and lettering styles, as well as printing processes, will be dealt with; also display problems, including bulletin boards, transparencies, other promotional materials. Stress will be on basic design and reproduction processes rather than on drawing skills. (No prereq. Limited to 30)

Fall Qtr Sec 1 T—6:20-8:50, NichH 102, Gates

Winter Qtr Sec 2 W—5-7:30, NichH 102, MacInnes

GC 1537 SALESMANSHIP. 4 degree credits, \$148.

Sales as an occupation, qualifications needed for successful career in selling and sales management. Principles and techniques practiced by such means as role playing and sales demonstrations. Resource people, guest speakers, recordings, films, and discussions provide material for students to develop salesplanning portfolios. Concurrent employment in selling or sales-related occupation recommended but not required. (No prereq)

Fall Qtr Sec 1 T—5-7:30, NichH 109, Nelson

Winter Qtr Sec 2 T—5-7:30, NichH 109, Nelson

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★GC 1540 ACCOUNTING FUNDAMENTALS I. 4 degree credits, \$148. (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 a service and merchandising business, 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 40)

Fall Qtr Sec 1 M—6:10-8:40, JonesH 10, Larson

Sec 2 Th—5:30-8, JonesH 10

Winter Qtr Sec 3 T—6:20-8:50, Richfield HS 143

Sec 4 M—6:20-8:50, JonesH 10

Spring Qtr Sec 5 M—6:10-8:40, JonesH 10

★GC 1542 ACCOUNTING FUNDAMENTALS II. 4 degree credits, \$148.

Continues first-year accounting sequence. Topics include handling of dividends, retained earnings and treasury stock, debt, investments, financial reporting, and sources and uses of working capital. Attention is given to examination of financial statements. Introduction to accounting for manufacturing operation and cost analysis problems. (Prereq 1540. Limited to 40)

Spring Qtr Sec 1 T—6:20-8:50, NichH 107

★GC 1551 MARKETING: INTRODUCTION. 4 degree credits, \$148. (IS)

Emphasis on fundamentals of marketing activities and design of a strategy. Includes target markets, segmentation analysis, marketing research, consumer behavior, and marketing mix. Current marketing events discussed in relation to text readings. (No prereq. Limited to 40)

Fall Qtr Sec 1 M—5:30-8, NichH 107, Peterson

★GC 1552 MARKETING: SALES PROMOTION. 4 degree credits, \$148.

Concentrates on design of a total promotional strategy with particular emphasis on advertising. Specific topics include moral issues in advertising, advertising agencies, media selection, budget preparation, and advertising campaigns. (Prereq 1551 or #. Limited to 35)

Winter Qtr Sec 1 W—5:30-8, NichH 207

★GC 1553 MARKETING: MANAGEMENT. 4 degree credits, \$148. (IS)

Emphasis on principles of management as explored through the Classical, Behavioral, and Management Schools. Specific topics include planning, organizing, directing, controlling, decision-making, leadership, and group dynamics. (Prereq 1551 or #. Limited to 40)

Spring Qtr Sec 1 M—5:30-8, NichH 207, Peterson

★GC 1705 PSYCHOLOGY AND THE MANAGEMENT OF STRESS: THEORY AND APPLICATION. 4 degree credits, \$148 (♦\$74)

Impact of psychological stress on human system. Stress management techniques (relaxation, imagery biofeedback) presented through holistic model emphasizing contributions of lifestyle behaviors (diet, exercise, time management). Mind-body interaction, psychosomatic illness, holistic health, and major stress theories. (No prereq. Limited to 30)

Fall Qtr Sec 1 W—6:10-8:40, NichH 109, Romano

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

- GC 1731 HOME LIFE: CONSUMER PROBLEMS.** 4 degree credits, \$148. (◆\$74) (IS)
 Develops understanding of economic system from viewpoint of the family as consumer unit. Emphasizes fundamentals of financial planning and personal economic decision making and application of these concepts to such specific areas as food, clothing, shelter, buying insurance protection, saving and investing, using credit facilities, and obtaining and evaluating consumer information. (No prereq)
Spring Qtr Sec 1 T—6:10-8:40, NichH 213, Killen
- ★**GC 1764 CREDITS AND COLLECTIONS.** 3 degree credits, \$111. (◆\$55.50)
 Nature and types of credit instruments and agencies; qualifications and work of credit manager, valuation, and use of financial statements and credit reports; collection methods and correspondence; bankruptcy and adjustments; credit limit and control. (No prereq. Limited to 35)
Fall Qtr Sec 1 T—6:20-8:30, JonesH 10
- GC 1894 PLANNING A GENERAL COLLEGE BACCALAUREATE PROGRAM.** 1 degree credit, \$37. (IS)
 For students who feel GC Baccalaureate Programs are appropriate for them. Students study the program guidelines, prepare a degree plan, and write a personal statement with the help of a study guide. The course instructors do not help students plan their future but rather help them fit their goals to what the college can offer. **Must be taken S-N.** (Prereq 75 credits)
Fall Spec Term Sec 1 **Sept. 24-Oct. 22, M—6:10-7:40, NichH 216**
Winter Spec Term Sec 2 **Jan. 8-Feb. 5, T—6:10-7:40, NichH 213**
Spring Spec Term Sec 3 **Apr. 3-May 1, W—6:10-7:40, NichH 216**
- GC 3114 PERSONAL ENVIRONMENTAL HEALTH.** 4 degree credits, \$150. (◆\$75)
 Health as a product of harmony between man and environment: biological, physical, social, and ideological. Content selected from following topics: personal health—interaction of mind and body, progress in medicine; environmental health—impact of new pollutions, environment and personality, occupational health and industrial medicine, community health organizations and consumer costs, health in college community. (Prereq 45 cr or #)
Fall Qtr Sec 1 M—6:10-8:40, SciCB 125, Dearden
- GC 3115 EVOLUTION AND THE MODERN SPECIES.** 5 degree credits, \$187.50.
 Descriptive course concerning principles of and topics dealing with evolution as well as practical application of scientific information to specific problems of adaptation to environmental change. Evolution of modern species of humans described from emergence of primate forms to appearance of ancestral forms from which humans as we know them may have evolved in response to certain environmental stimuli and conditions. (Prereq 1131)
Winter Qtr Sec 1 W—5:30-8, SciCB 125, Hatch
- GC 3132 HUMAN BODY: CARDIOVASCULAR ANATOMY AND PHYSIOLOGY.** 4 degree credits, \$150. (◆\$75)
 An in-depth study of the anatomy and physiology of the cardiovascular system is considered along with abnormalities in and malfunctioning of the system. The influence of drugs, hormones, stress, injury, etc., along with measures to control these influences will also be considered. (Prereq 1132 or equivalent)
Spring Qtr Sec 1 M—6:10-8:40, SciCB 125, Dearden

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

GC 3134 NATURE AND ITS IMPACT ON THE MIND. 4 degree credits, \$150. (◆\$75)

Begins with field trips to natural areas and museums in the University vicinity. Aspects of nature that may be common to arts of various societies; models of nature in art and science; patterns, regularity and symmetry, effects of scale, structures large and small, colors, sounds. Students try to interpret what they have sensed through visual and literary ways. Some attempt simple scientific experiments. Includes reading and discussing treatment of nature in selected literature. **Must be taken S-N.** (No prereq)

Spring Qtr Sec 1 T—6:10-8:40, SciCB 125, Schwabacher

★OGC 3217 COMMUNITY SERVICE INTERNSHIP. 6-12 degree credits, \$37.50 per credit.

Upper division students acquire career-related experience in human services, urban affairs, or government working as interns/staff members in a local agency. Structure, functions, funding, politics, and goals of agency examined in weekly small-group seminars. Short written assignments, readings, and a journal help students blend fieldwork with academic materials. A paper/project requires interns to explore field-related topic in depth or make research contribution to agency. (Prereq Aging Studies Program student and written #. A joint Day/Extension class limited to 12 Extension students)

Fall Qtr Sec 1 M—5:30-8, NichH 254, Foat

Sec 2 T—5:30-8, NichH 254, Skovholt, Moser

Spring Qtr Sec 3 W—5:30-8, NichH 304, Foat

GC 3235 POVERTY LAW. 5 degree credits, \$187.50.

Causes of poverty and problems that poor people encounter. Students learn how to function as advocates for themselves or others who receive public assistance (AFDC families, senior citizens, minorities, and the employed poor). Housing problems, domestic relations, health care, and legal system in relation to their impact on the poor. (Prereq 1235 or #)

Spring Qtr Sec 1 T—5-8, JonesH 10, Hower

GC 3238 PUBLIC PROGRAMS IN AGING: LOCAL, STATE, AND NATIONAL. 4 degree credits, \$150. (◆\$75)

An overview of government programs at the local, state, and national levels. Guest speakers from government agencies describe their programs. Discussion of the Older Americans Act, Social Security Program, Medicare Program, Medicaid Program, long-term care, advocacy. (No prereq)

Spring Qtr Sec 1 Th—5:30-8, BlegH 110, Patten

★GC 3282 PSYCHOLOGY APPLIED TO SOCIAL PROBLEMS. 4 degree credits, \$150.

Social-psychological analysis of social problems facing society today, such as drug use, crime, violence, and prejudice, and how they might be understood and solved through applications of psychological research findings and methods. (Prereq basic psychology course and junior or senior standing. Limited to 50)

Spring Qtr Sec 1 W—6:10-8:40, NichH 109, Brothen

GC 3285 ANTHROPOLOGY OF THE CITY. 4 degree credits, \$150 (◆\$75)

Anthropologist's way of looking at urbanization as a process, and the city as a community made up of a variety of cultures. Ecological perspective as it relates to the
(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

whole of interaction among various cultures. Subcultures based upon social class, race, ethnicity, and social deviance are examined to achieve a better understanding of the American city in the 1980s. (No prereq)

Fall Qtr Sec 1 **W**—6:10-8:40, NichH 107, O'Toole

OGC 3292 URBAN DECISION MAKING IN THE TWIN CITIES. 4 degree credits, \$150.

Major issues, problems, and government institutions of Twin Cities metropolitan area. How and why decisions are made within broader context of physical environment and political process. Topics may include population trends, housing, transportation, urban renewal, land use, and government finance. (No prereq. A joint Day/Extension class)

Spring Qtr Sec 1 **Th**—5:30-8, NichH 213, Flynn

GC 3311 GENERAL ARTS. 4 degree credits, \$1311, \$150.

Examines representative works of art from genres of painting, sculpture, architecture, literature, and music to discover how and why art is created and enable students to formulate and evaluate ideas and attitudes about it. (No prereq. Meets concurrently with 1311)

Winter Qtr Sec 1 **Th**—6:20-8:50, NichH 111, Byrne

★GC 3342 MORAL ISSUES IN BUSINESS. 4 degree credits, \$150. (◆\$75)

Relationship of personal moral attitudes (egoism, hedonism) and general ethical systems (formalism, utilitarianism) to common practices in business. Issues involving conflict of interest, truth in advertising, preferential hiring, and concern for environment examined in context of corporate and social responsibility. (No prereq. Limited to 30)

Fall Qtr Sec 1 **M**—5-7:30, NichH 109, Zanoni

Winter Qtr Sec 2 **T**—5-7:30, NichH 216, Kurak

Spring Qtr Sec 3 **T**—5-7:30, Irondale HS, New Brighton, Zanoni

GC 3344 MORAL ISSUES IN MEDICAL AND HEALTH PROFESSIONS. 4 degree credits, \$150. (◆\$75)

By grappling with specific personal and social problems relating to morality and health services (e.g., availability of and right to health care, problems of treatment, right to die, etc.), students learn to understand and evaluate nature and implications of moral issues that arise in making choices and determining rights in those areas. (No prereq)

Winter Qtr Sec 1 **M**—5-7:30, NichH 216, Zanoni

GC 3345 MORALITY AND THE LAW. 4 degree credits, \$150. (◆\$75)

By examining such issues as the morality that makes law possible, concept of law, theories of law, and problems of distributive and retributive justice, students gain objective understanding of nature and limits of relationship and interdependence of legality and morality. (No prereq)

Winter Qtr ★Sec 1 **T**—5-7:30, Ramsey HS, Roseville, Zanoni (Limit 35)

Spring Qtr Sec 2 **M**—5-7:30, NichH 216, Zanoni

GC 3374 FILM AND SOCIETY. 4 degree credits, \$150 plus \$10 course fee. Total \$160. (◆\$75 plus \$10 course fee. Total \$85)

Ways in which film and society affect each other, social issues raised in film, public attitudes toward film, effect of film on attitudes and behaviors, and how film provides illumination and insight into areas of society it portrays, such as urban living, minority stereotyping, ethical decisions, marriage and family, politics, sexual mores. (Prereq 45 cr or #: 1374 recommended)

Winter Qtr Sec 1 **W**—6:20-8:50, NichH 216, Miller

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

GC 3376 HUMANITIES: THE EXPERIENCE OF AGING. 4 degree credits, \$150.

Using stories, plays, poetry, essays, and narrative films, students examine unique characteristics of, and individual responses to, aging. Stereotypes, various roles older persons assume, communication between old and young, problems in family relationships, and crises at critical life stages. Students encouraged to analyze attitudes toward their own aging and relationships with older persons. (No prereq. A joint Day/Extension class)

Fall Qtr Sec 1 **W**—5-7:30, NichH 216, Yahnke

GC 3377 MURDER, MYSTERY, AND MAYHEM: WHODUNIT? 4 degree credits, \$150.
(♦\$75) (IS)

Themes of death by violence and detection and punishment of the murderer, concentrating on the origins and the development of the "murder mystery" and the detective story. Readings in Poe, Collins, Conan Doyle, Chesterton, Hammett, Chandler, Sayers, Christie, Simenon, and others. Implications of the genre; reasons for its appeal, the detective as hero, the role of violence in society; moral issues and dilemmas, changing trends and attitudes. (No prereq)

Spring Qtr Sec 1 **W**—6:20-8:50, NichH 111, MacInnes

★GC 3423 WRITING THE RESEARCH OR SURVEY REPORT. 4 degree credits, \$1424, \$150.

Writing informal and formal survey or research reports; discovering information resources; developing multimedia techniques for securing, tabulating, and interpreting data; and organizing, illustrating, writing, and presenting final reports. Designed especially for students working toward baccalaureate degrees or preparing for senior demonstrations. Close and frequent liaison between student, supervisor or adviser in field of concentration, and professor teaching course. **S-N recommended.** (Prereq 1421. 1422 recommended. Limited to 20)

Fall Qtr Sec 1 **T**—5-7:30, NichH 107

Winter Qtr Sec 2 **T**—6:20-8:50, NichH 107

Spring Qtr Sec 3 **M**—5-7:30, NichH 107, Kurak

Sec 4 **Th**—6:20-8:50, NichH 107

GC 3454 UNDERSTANDING QUANTITATIVE RESEARCH METHODS. 4 degree credits, \$150.

What does the data tell us about the relationship between the two variables? That question is now asked in almost all disciplines from agronomy to zoology. The problem might involve quality control in manufacturing, market research in business, politics or even education, laboratory research in psychology or medicine or some other method in another discipline. In all cases, the procedure involves a) formulating measurable questions, b) designing reliable and valid instruments, c) sampling appropriate populations, d) presenting the data, and e) interpreting the results. Students will be expected to design, conduct, and report an investigation about a topic of interest to them. (Prereq elementary statistics)

Spring Qtr Sec 1 **W**—5-7:30, FolH 101, Garfield

★GC 3464 COMMUNICATION IN ORGANIZATIONS. 4 degree credits, \$150.

For managers, supervisors, and others who directly control quality of life of persons in organizations; focuses on processes and problems involved in working and communicating with people in organizational settings and on knowledge, attitudes,
(continued next page)

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and skills that underlie effective behavior in organizational relationships. (Prereq 1461 or 1465, 5 cr in psychology. Limited to 40)

Fall Qtr Sec 1 **Th**—5-7:30, NichH 111, Kyle

Winter Qtr Sec 2 **W**—5-7:30, NichH 111, Kyle

Spring Qtr Sec 3 **T**—6:20-8:50, NichH 122, Benson

GC 3465 COMMUNICATION FOR HEALTH WORKERS. 4 degree credits, \$150.

Special communication needs that arise from stressful conditions often associated with health care. How to talk and relate to people in pain or discomfort; to those facing certainty or uncertainty of prolonged and serious illness; to the crippled, aged, dying; and to patients' relatives. (No prereq. 1465 recommended)

Winter Qtr Sec 1 **W**—6:20-8:50, NichH 209, Guiderman

GC 3484 WRITING FOR PUBLICATION. 4 degree credits, \$150 (IS)

Students develop projects of professional quality for such printed media as trade and professional journals, in-house publications, community newspapers, or magazines for a particular audience. Under instructor's guidance, students discuss each other's work with a view toward improving and possible marketing manuscripts. (Prereq 1421, #, Δ...1422 or 1484 recommended)

Winter Qtr Sec 1 **Th**—5-7:30, NichH 122, Collins

★OGC 3514 RESEARCH FOR STARTING A SMALL BUSINESS. 5 degree credits, \$187.50.

For students interested in starting a small business. The course will investigate business opportunities; however, the student is expected to have a specific business in mind for investigation throughout the quarter. Emphasis is on marketing strategy, financial analysis and financial projections, defining product/service offerings, and promotion. (Prereq 1513, 1540, 1551 and written #. **Contact Mary K. Nelson, 53 Nicholson Hall, 9 a.m.-4, 373-2594.** A joint Day/Extension class limited to 10 Extension students)

Winter Qtr Sec 1 **W**—5-8:30, JonesH 11, Ludlow

★OGC 3517 ADVANCED COOPERATIVE BUSINESS INTERNSHIPS. 4 degree credits, \$150.

A course designed to help students advance in their chosen career field by applying classroom learning to work experience. In the seminars students will apply decision making, problem-solving, communication, and management skills in positions which are above entry level. The emphasis is on career advancement and job satisfaction. Students work a minimum of 15 hours a week. Work sites are generated by the Office of Cooperative Education, or during the orientation class, GC 1515, students may request placement in positions they already hold. **Must be taken S-N.** For further information, contact the Office of Cooperative Education, EltH N387, General College, 373-5243. (Prereq GC 1515 and #. Meets concurrently with 1517. A joint Day/Extension class limited to a combined total of 20 Extension students)

Winter Qtr Sec 1 **W**—5-7:30, JonesH 10, Nelson

Spring Qtr Sec 2 **W**—5-7:30, JonesH 4, Nelson

★GC 3531 WRITING FOR BUSINESS AND THE PROFESSIONS. 4 degree credits, \$1531, \$150. (IS)

Students write letters, informal and formal reports, recommendations, proposals, summaries, memos—in short, the forms of writing used in business; in health, (continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

education, and welfare; and in legal professions. Effort is made each quarter to adapt content to vocational needs of students enrolled. Form, clarity, economy of expression, and suitable tone are stressed. *Typed final drafts are required.* (Prereq 45 cr. Limited to 25)

Fall Qtr Sec 1 **T**—5-7:30, NichH 254, Adamson
Winter Qtr Sec 2 **T**—5-7:30, NichH 254, Adamson
Spring Qtr Sec 3 **Th**—5-7:30, NichH 254, Adamson

(See also Comp 0003C, Review of Business English)

★GC 3560 PERSONNEL ADMINISTRATION. 4 degree credits, \$150.

An overview of the personnel related activities in business and other organizations. Using the personnel department setting, some areas of study will be recruiting, employee reward systems, employee training, and evaluation techniques. (Prereq 45 cr or #. Limited to 50)

Fall Qtr Sec 1 **Th**—6:10-8:40, NichH 207, Kroll
Winter Qtr Sec 2 **Th**—6:10-8:40, NichH 207, Kroll

★GC 3571 COMPUTER APPROACH: PROBLEM SOLVING. 4 degree credits, \$150 plus \$5 course fee. Total \$155.

Experience in using computer as problem-solving tool. Students write and run programs using computer language (BASIC) and become familiar with some routines available in library of computer. Emphasis on how computer may be used to help solve problems. Topics include elements of BASIC language, system commands, file manipulation, text editing, word processing, and linear programming. Provides good background for further programming courses. (Prereq high school algebra or #. Limited to 40)

Fall Qtr Sec 1 **T**—5-7:30, NichH 211, Robertson
Sec 2 **Th**—5-7:30, NichH 211, Robertson
Winter Qtr Sec 3 **M**—5-7:30, NichH 211 150, Robertson
Spring Qtr Sec 4 **T**—5-7:30, NichH 211, Robertson
Sec 5 **Th**—5-7:30, NichH 211, Robertson

The following Legal Studies courses, GC 3532 through 3593, have limits on the number of students admitted to the course. Students must obtain written permission from Coordinator, Paralegal Program, University of Minnesota, 106 Nicholson Hall, 216 Pillsbury Dr. S.E., Minneapolis, MN 55455 (373-4168 or 373-4104) as soon as possible, in order to enroll in this class. The coordinator will send written permission to the student who will present it to the Extension Registration Office, 101 Westbrook Hall, at the time of registration. Students may register by mail or in person, during regular registration dates, for these courses.

GC 3532 LEGAL WRITING. 4 degree credits, \$150.

Principles of clear, concise, professional writing for paralegals. Students write short memoranda, correspondence, and extended arguments in response to hypothetical legal problems. Emphasis on analyzing audience, defining goals, and manipulating tone in various contexts. (Prereq 1421...1422 recommended.) **See registration note above, and page 227.**

Fall Qtr Sec 1 **W**—5-7:30, NichH 122, Collins
Spring Qtr Sec 2 **W**—5-7:30, NichH 209, Miller

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

OGC 3581 LEGAL STUDIES: BUSINESS ORGANIZATIONS. 4 degree credits, \$150.

The study of the legal organization of business entities is the primary focus of this course. Emphasis is on the role of the lawyer and the legal assistant in the formation of various business organizations. This includes a survey of the fundamental principles of law applicable to each type of business organization and preparation of the related documents. (Prereq 1540 or Acct 1024-1025 or 1050, GC 1235 and 1534 or BLaw 3058-3078, 3088 and written Δ . A joint Day/Extension class) See registration note above, and page 227.

Winter Qtr Sec 1 T—5:30-8, BlegH 120

OGC 3582 LEGAL STUDIES: REAL ESTATE. 4 degree credits, \$150.

The law relating to real property and the various steps in common types of real estate transactions are the primary topics treated in this course. Special emphasis is given to the drafting and mapping of legal descriptions of land, and to the drafting of legal instruments such as purchase agreements, deeds, contracts for deed, and mortgages. Also covered is the administrative framework within which the practice of real estate law operates. (Prereq 1540 or Acct 1024-1025 or 1050; GC 1235 and 1534 or BLaw 3058-3078, 3088 and written Δ . A joint Day/Extension class) See registration note above and page 227.

Winter Qtr Sec 1 Th—5:30-8, Law 35

(See also Real Estate, Informal Courses and Professional Improvement Courses)

OGC 3583 LEGAL STUDIES: ESTATE PLANNING AND ADMINISTRATION. 4 degree credits, \$150.

This course is intended to enable the student to acquire an awareness of frequently used arrangements for owning property and for controlling its disposition at time of owner's death. About equal attention will be given to tax and nontax consequences of alternative estate planning decisions. During the latter part of the term, students will work with problems requiring fact gathering for estate planning, preparation of probate inventory, schedule of nonprobate assets, petition for appointment of personal representative and probate of will, disposition of claims, final account, and death tax returns for administration of a simple estate. (Prereq 1540 or Acct 1024-1025 or 1050; GC 1235 and 1534 or BLaw 3058-3078, 3088 and written Δ . A joint Day/Extension class) See registration note above, and page 227.

Fall Qtr Sec 1 M—5:30-8, Law 45, Berens

OGC 3584 LEGAL STUDIES: LITIGATION AND TRIAL PRACTICE. 4 degree credits, \$150.

This course includes an analysis and discussion of the premises of civil litigation, sources of law, the court systems, attorneys' functions, common types of underlying civil lawsuits, usual defenses, Minnesota civil procedures, discovery procedures, court procedures, trials, post-trial motion procedures, appeal, enforcement of judgment, and good investigation of facts basic to adequate preparation for litigation. Particular attention is given to the role of legal assistants in assisting the attorneys in these matters. (Prereq 1540 or Acct 1024-1025 or 1050; GC 1235 and 1534 or BLaw 3058-3078, 3088 and written Δ . A joint Day/Extension class) See registration note above, and page 227.

Winter Qtr Sec 1 W—5:30-8, AndH 330

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

OGC 3585 LEGAL STUDIES: INCOME TAXATION. 4 degree credits, \$150.

This course provides a detailed study of the law of income taxation—state, federal, and local—including preparation of income tax returns and related materials and a survey of the various administrative and judicial tribunals, and their jurisdiction involved in the determination of income tax controversies. (Prereq 1540 or Acct 1024-1025 or 1050; GC 1235 and 1534 or BLaw 3058-3078, 3088 and written Δ . A joint Day/Extension class) See registration note above, and page 227.

Fall Qtr Sec 1 **W**—5:30-8, Law 35, Weikart

GC 3586 LEGAL STUDIES: LEGAL RESEARCH. 4 degree credits, \$150.

This required course examines in depth the law library, surveys the various reference sources available to lawyers in determining applicable law, and studies the processes of legal research and writing of memoranda presenting results of that legal research. Utilization of statutes, case reports, encyclopedias, treatises, and other legal research sources is also treated. (Prereq 1540 or Acct 1024-1025 or 1050; GC 1235 or 1534 or BLaw 3058-3078, 3088 and written Δ) See registration note above, and page 227.

Fall Qtr ★● Sec 1 **W**—5:30-8, BlegH 255, Marchesani (A joint Day/Extension class limited to 15 Extension students)

Spring Qtr Sec 2 **T**—5:30-8, BlegH 120

OGC 3587 LEGAL STUDIES: LEGAL STUDIES INTERNSHIP. Credits arr. \$37.50 a credit.

The internship experience of supervised legal assistant activity may also be arranged through the director of the program. Opportunities may include law firms, legal aid clinics, or state and county offices. The director should be notified of a student's desire to arrange an internship by the middle of the quarter preceding the internship period. (Prereq written Δ . Must be taken S-N. A joint Day/Extension class) See registration note above, and page 227.

Spring Qtr Sec 1 **Time arr.**

OGC 3591 PROBATE. 4 degree credits, \$150.

Currently under development. Description will be available from the coordinator by Nov. 1, 1984. (Prereq written Δ . A joint Day/Extension class)

Spring Qtr Sec 1 **Th**—5:30-8, Law 45

OGC 3592 LEGAL STUDIES: DOMESTIC RELATIONS. 4 degree credits, \$150.

The Domestic Relations course acquaints the paralegal student with the substantive and procedural law in the family law area. This course covers marriage, women's rights, minors' disabilities, annulment, child custody, and adoption. Primary emphasis is on Minnesota statutes and case law. (Prereq 1540 or Acct 1024-1025 or 1050; GC 1235 and 1534 or BLaw 3058-3078, 3088 and written Δ . A joint Day/Extension class) See registration note above, and page 227.

Spring Qtr Sec 1 **M**—5:30-8, AndH 230, Marron

OGC 3593 LEGAL STUDIES: LAW OFFICE ADMINISTRATION. 4 degree credits, \$150.

A special topics course intended to familiarize paralegal students with some of the more common aspects of systems and procedures employed in legal settings. (Prereq written Δ . A joint Day/Extension class) See registration note above, and page 227.

Winter Qtr Sec 1 **M**—5:30-8, AndH 330

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

GC 3594 (formerly 3588) LEGAL STUDIES: COMPUTERS IN THE LAW FIRM. 4 degree credits, \$150.

The major objective of this course is to provide students with enough contact with a computer system to enable them to feel comfortable in their interactions with computers. The students will learn to understand the usefulness of computer systems in law offices. Content includes introduction to data processing, introduction to litigation support, case analysis, and records management. (Prereq written Δ . A joint Day/Extension class) See registration note above, and page 227.

Fall Qtr Sec 1 **Th**—5:30-8, Law 15

Spring Qtr Sec 2 **T**—5:30-8, BlegH 240

★GC 3602 APPLIED SUPERVISION. 4 degree credits, \$150. (IS)

Practical approaches to supervision principles and problems in the small- and medium-size business. Through case problems, role playing in simulated business situations, and decision exercises, students learn to understand the relationship between authority and responsibility as well as the delegation process; to select and apply manager or group decision-making methods; to understand some techniques of the communication process between management and employees; to have some practical knowledge of the concept of job enrichment; and to identify some of the characteristics of a high productivity manager. (Prereq 75 cr or #. Limited to 40)

Fall Qtr Sec 1 **M**—6:20-8:50, NichH 209

Spring Qtr Sec 2 **W**—6:10-8:40, NichH 213, Kroll

(See also Industrial Relations and Professional Improvement Courses)

★GC 3605 INTERVIEWING. 4 degree credits, \$150 plus \$25 special fee. Total \$175.

For students planning to enter occupations in which structured communication—particularly formal interview—is a required skill. For students who are undecided about their life's work, course provides tryout experience in developing skill related to wide spectrum of occupations. Interactive process of interview and roles of participants in dyad, variety of communication patterns in interview context, and how the interviewer affects others (and others affect the interviewer) in goal-directed dyadic interaction. Students develop general interviewing skills through actual and simulated situations. (No prereq. Limited to 30)

Winter Qtr Sec 1 **W**—6:10-8:40, NichH 304, Skovholt

★GC 3612 MENTAL HEALTH: PRINCIPLES AND PRACTICES. 4 degree credits, \$150.

Historical and controversial views of mental illness and mental health; mental illness as a social problem; medical-biological and psychological conceptions of the adjustment process; classification of mental disorders; childrearing patterns related to the onset of personality problems and coping styles; behavior effects of punitive and positive reinforcement techniques; comparison of assumptions and methods in medical forms of therapy, psychotherapy, and behavior therapy; ethical and legal issues in commitment and care of mental patients; emerging role of paraprofessionals in psychological health care. (No prereq. Limited to 30)

Spring Qtr Sec 1 **W**—6:10-8:40, NichH 304, Skovholt

GC 3642 SEMINAR: SMALL-GROUP FACILITATION. 3 degree credits, \$112.50.

Significant elements of small-group development and improvement of skills in small-group situations. (Prereq Human Services Generalist student, #. A joint Day/Extension class)

Winter Qtr Sec 1 **W**—5:30-8, NichH 304, Foat

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

GC 3720 VIOLENCE IN THE FAMILY. 4 degree credits, \$150 (◆\$75)

Focus is on the form and amount of family violence. Included are spouse abuse, child abuse, sexual abuse, and aging parent abuse. Attention directed to factors which cause and inhibit family violence and ways to reduce abuse. Course particularly relevant for those preparing to work with family problems. (No prereq)

Winter Qtr Sec 1 T—6:10-8:40, NichH 209, Latts

★GC 3726 DYNAMICS OF FAMILY LIFE. 4 degree credits, \$150. (◆\$75)

Course will focus on the relationships occurring within the family unit. The emphasis will be to look at the relationship between individual behavior with family behavior. Specific topics to be studied will include: 1) the interdependence of individual and family stability at each stage of growth from infancy to old age; 2) the role of the family in the emotional development of the child; 3) the family as the stabilizer of mental health for the adult; 4) the family as a conveyor belt for anxiety and conflict; 5) the interplay of conflict between family and community, conflict in family relationships and conflict within individual family members; 6) breakdown in adaptation and illness as symptoms of family illness and disorganization. (No prereq. Limited to 50)

Spring Qtr Sec 1 M—6:10-8:40, NichH 109, Latts

(See also Family Social Science; and CEW 0200, Blended Families: Living with Someone Else's Children)

★GC 3732 CONSUMER TRANSACTIONS AND THE LAW. 4 degree credits, \$150.

Students investigate the relationship between the consumer market place and the law. Focus is on preventive law for the consumer seller/buyer at the pre-agreement, agreement, and post-agreement stages of consumer transactions. Legal self-sufficiency, as a cost saving, effective consumer technique, is stressed in an applied skills perspective. Topics covered in the course include the following: a general introduction to consumer law; deceptive practices and legal regulation of marketing techniques; extending credit; usury regulation; product warranty issues; security agreement regulation; debtor default and creditor collection remedies; buyer/seller remedies for contractual non-performance; product liability for defective goods; and debt counseling and bankruptcy concerns. (Prereq 1534 or 1235. Limited to 35)

Winter Qtr Sec 1 T—6-8:30, NichH 122, Kahn

★GC 3761 CONSUMER/INDUSTRIAL BUYER BEHAVIOR. 4 degree credits, \$150.

Concentrates on consumer behavior as it relates to the buying-decision process by examining who the consumer is and the environment in which he or she operates, identifying internal and external influences on buying behavior, and describing the buying-decision process. Specific topics include perception, attitudes, learning, motivation, personality, and various societal influences. (Prereq 1551 or #, 75 cr. Limited to 40)

Winter Qtr Sec 1 M—5-7:30, NichH 207, Peterson

★GC 3763 PROFESSIONAL SALES PROBLEMS. 4 degree credits, \$150.

Students will analyze current sales problems and ways to resolve them. Includes such areas as economic effects on productivity and commissions, qualifying prospective customers, cold calls, and closing a sale. (Prereq 75 credits, 1551, 1053 or 1537. Limited to 35)

Spring Qtr Sec 1 T—5-7:30, NichH 109, Nelson

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★GC 3764 CREDITS AND COLLECTIONS MANAGEMENT. 4 degree credits, \$150.

Focuses on credits and collections issues relating to sales and business administration. Includes relevant current legislation, data processing systems, impact of economy, and controlling credit. (Prereq 1551 and 1053 or 1537. Limited to 35)

Fall Qtr Sec 1 W—6:20-8:50, NichH 209A

★OGC 3823-3824-3825 TOWARD A GOOD LIFE: THE IDEAL. 3 degree credits each section, \$112.50 each section. Total \$337.50.

Humankind's universal hope for a personal "good life" forms the central theme of this interdisciplinary course. Students examine and compare ways in which people throughout history have sought a good life. Topics include human nature and needs, the idea of the good, and dreams of utopia. Perspectives of the humanities, natural and social sciences, and arts are examined. Course format includes group discussions, readings, lectures, artistic experiences, and television viewing. 3823: *Humanities*. 3824: *Social Science*. 3825: *Natural Science*. Each section is three credits. **All three sections must be taken concurrently; students must fill out a separate registration form for each section.** (Prereq junior, senior or #. Sections 1, 2, and 3 meet concurrently. A joint Day/Extension class limited to 30 Extension students)

Fall Qtr 3823 Sec 1 TTh—5:30-9, NichH 111, MaclInnes
 3824 Sec 2 TTh—5:30-9, NichH 111, Hathaway
 3825 Sec 3 TTh—5:30-9, NichH 111, Denham

★OGC 3826-3827-3828 TOWARD A GOOD LIFE: THE POSSIBLE. 3 degree credits each section, \$112.50 each section. Total \$337.50.

Topics include golden ages, social criticism and dystopias, and social planning. Students consider what constitutes a good life for their communities and themselves, and how to achieve a better life in today's world. 3826: *Humanities*. 3827: *Social Science*. 3828: *Natural Science*. Each section is three credits. **All three sections must be taken concurrently; students must fill out a separate registration form for each section.** (Prereq 3823-3824-3825 or #. Sections 1, 2, and 3 meet concurrently. A joint Day/Extension class limited to 30 Extension students)

Spring Qtr 3826 Sec 1 TTh—5:30-9, NichH 111, MaclInnes
 3827 Sec 2 TTh—5:30-9, NichH 111, Hathaway
 3828 Sec 3 TTh—5:30-9, NichH 111, Denham

★OGC 3834-3835-3836 CONFLICT AND SOCIAL CHANGE. 3 degree credits each section, \$112.50 each section. Total \$337.50

From humanities and social and natural science viewpoints, students consider conflict as source and result of change in modern pluralistic society. Conflicts generated and directed by cultural assumptions, bureaucratic procedures, educational and legal processes, social movements, and warfare are examined. Course content draws upon myths, social and natural scientific studies, literature, television programs, films, journalism, personal experiences, and music and other arts. Course format includes class and panel discussions, lectures, small-group exercises, debates, field trips, and individual or group projects. **All three sections must be taken concurrently; students must fill out a separate registration form for each section.** (No prereq. Sections 1, 2, and 3 meet concurrently. A joint Day/Extension class limited to 30 Extension students)

Winter Qtr 3834 Sec 1 TTh—NichH 111, Johnson
 3835 Sec 2 TTh—NichH 111, Buckley
 3836 Sec 3 TTh—NichH 111, Adamson

Read about abbreviations, symbols, and maps on page 60.
 Courses and sections in red have limits on enrollment. See page 20.

★OGC 3841 MINNESOTA RESOURCES. 4 degree credits, \$150. (♦\$75) (IS)

Quality of life in Minnesota observed in context of the "American dream" and the "good life." Minnesota's people, physical environment, and economic activities are discussed. Films, slides, and audio tapes provide immediate experience with present-day Minnesota. (No prereq. A joint Day/Extension class limited to 40 Extension students)

Fall Qtr Sec 1 T—5:30-8, NichH 213, Flynn

Music, Dance, Speech at MacPhail Center

MacPhail Center for the Arts and General College cooperatively offer a variety of learning opportunities for credit. These courses may also be taken for no credit at MacPhail (see page 521). The opportunities range from classroom instruction to private lessons and workshops in music, dance, and photography. These courses apply to General College degrees. They may not be used to fulfill requirements for a major or minor in Music or Music Education at the University of Minnesota.

Registration for these courses may be completed *only* at the MacPhail Center in downtown Minneapolis.

Write or call MacPhail for registration information and fees for credit instruction:

MacPhail Center for the Arts
1128 LaSalle Avenue
Minneapolis, MN 55403
(612) 373-1925

The courses listed below are also offered for no credit, either as classes or as individual private lessons. For noncredit registration classes, see MacPhail Center courses on page 521. For noncredit private lessons, call or visit the MacPhail Center, 373-1925.

GC 1300 Music Theory

Music theory is the study of those aspects of music not involved in the actual mechanics of playing an instrument or singing.

Theory (*private*)

Materials of Music I, II, III, IV, V

GC 1301 Keyboard

Group or individual keyboard instruction is available in piano, organ, and accordion in a variety of options and at various levels of development.

Piano (*private*)

Class Piano for Beginners I, II, III

Organ (*private*)

Coaching for Accompanists

Accordion (*private*)

Suzuki Piano Pedagogy

GC 1302 Strings

Private lessons and classes in string instruments.

Violin (*private*)

Electric Bass (*private*)

Viola (*private*)

Lute (*private*)

Cello (*private*)

Banjo (*private*)

Double Bass (*private*)

Harp Class

Harp (*private*)

Singer-Guitarist Performance Class

Viol da Gamba (*private*)

Banjo Class

Acoustic Guitar (*private*)

Classical Guitar Ensemble

Classical Guitar (*private*)

Viol Consorts

Electric Guitar (*private*)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

GC 1303 Woodwinds, Brass, Percussion

Instruction in woodwinds, brass, and percussion is open to students at all levels of proficiency.

Flute (*private*)

Clarinet (*private*)

Oboe (*private*)

Bassoon (*private*)

English Horn (*private*)

Recorder (*private*)

Saxophone (*private*)

Trumpet (*private*)

Trombone (*private*)

French Horn (*private*)

Baritone/Euphoneum (*private*)

Tuba (*private*)

Percussion (*private*)

Saxophone Ensemble

Brass Ensemble

French Horn Ensemble

Percussion Ensemble

GC 1304 Voice

Instruction is offered for beginners as well as advanced singers.

Voice (*private*)

Understanding Your Voice I, II

Finishing Touches I, II, III

Musical Theater Workshop

Choral Conducting I, II

Opera Week

Voice as a Second Instrument

Opera Training I, II, III

Gospel/Jazz Choir

Ensemble Singer

Madrigal/Motet Choir

GC 1305 Dance

Instruction is offered for beginning as well as advanced dancers.

Jazz Dance I, II

Tap I, II

GC 1306 Ensembles

Chamber Music Clubs

Early Music Consorts

Instrumental Conducting

Jazz Workshop

Jazz Combo Night

GC 1307 Music History and Literature

Music Appreciation I, II, III

GC 1487 Photography

Photography: The Camera

Basic Photography I, II

GC 1506 Piano Tuning and Repair

Genetics and Cell Biology (GCB)

College of Biological Sciences

Textbooks for most GCB courses are available at Books Underground on the St. Paul campus (373-0800)

V. Elving Anderson, Professor of Genetics and Cell Biology

Robert McKinnell, Professor of Genetics and Cell Biology

Leon Snyder, Professor of Genetics and Cell Biology

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

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 376-3000 two weeks before mail registration for that quarter begins.

GCB 3002 HUMAN GENETICS, SOCIAL AFFAIRS. 3 degree credits, \$3022, \$Biol 1101, \$Biol 5003, \$141.75; 4 degree credits with term paper, \$189.

For students in programs not directly related to biological sciences. Human genetics; study of individuals, families, populations, and races with respect to differences in intelligence, behavior, disease, and other matters of social concern. (No prereq)

Winter Qtr Sec 1 **W**—6:20-8:50, MoosT 2-520

Books available at the Health Sciences Bookstore (376-4007).

GCB 3002 is also offered as a Television Course. See page 551.

GCB 3008 THE BIOLOGY OF CANCER. 3 degree credits, \$141.75.

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)

Spring Qtr Sec 1 **W**—6:30-8:45, BioSci 6, StP Campus, McKinnell

GCB 3008 is also offered as a Television Course. See page 551.

GCB 3022 GENETICS. 4 degree credits, \$Biol 5003, \$189.

Not intended for biology majors. Mechanisms of heredity, their implications for biological populations and applications to practical problems. (Prereq Biol 1009. Meets concurrently with 5022. A joint Day/Extension class)

Fall Qtr Sec 1 **MW**—6-7:30, ClaOff B45, StP Campus, Snyder

(See also Biology and Biochemistry)

GCB 5022 GENETICS. 3 degree credits, \$3022, \$Biol 5003, \$141.75.

See course description for 3022. (No prereq. Not open to graduate students in genetics. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3022. A joint Day/Extension class)

Fall Qtr Sec 1 **MW**—6-7:30, ClaOff B45, StP Campus, Snyder

GCB 5043 HUMAN GENETICS. 3 degree credits, \$141.75.

Principles of human genetics at the molecular, cellular, individual, and population levels. Chromosomal and biochemical disorders; gene mapping; mutation and natural selection; variation in intelligence and behavior; genetic screening, counseling and therapy. (Prereq 3022 or Biol 5003 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **M**—6:15-8:30, Botany B6, Anderson

Geo-Engineering (GeoE)

(See Civil Engineering)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Geography (Geog)

College of Liberal Arts

Textbooks for most Geog courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450).

(See also General College and Informal Courses nature courses)

John S. Adams, Professor of Geography
 Russell B. Adams, Associate Professor of Geography
 Sona K. Andrews, Assistant Professor of Geography
 Ward J. Barrett, Professor of Geography
 John R. Borchert, Professor of Geography
 Dwight A. Brown, Associate Professor of Geography
 Philip J. Gersmehl, Associate Professor of Geography
 John Fraser Hart, Professor of Geography
 Mei-Ling Hsu, Professor of Geography
 Fred E. Lukermann, Professor of Geography
 Cotton Mather, Professor of Geography
 Roger P. Miller, Assistant Professor of Geography
 Philip W. Porter, Professor of Geography
 John G. Rice, Professor of Geography
 Joseph E. Schwartzberg, Professor of Geography
 Earl P. Scott, Associate Professor of Geography
 Eric S. Sheppard, Associate Professor of Geography
 Richard H. Skaggs, Professor of Geography
 Roderick H. Squires, Associate Professor of Geography
 Yi-Fu Tuan, Professor of Geography
 Connie H. Weil, Assistant Professor of Geography

A MAJOR IN GEOGRAPHY CAN BE COMPLETED IN THE EVENING.

Required courses for the geography major are normally offered yearly or every two years. Interested students should discuss plans with an Extension counselor (373-3905).

B.A. Major Sequence

Required Preparatory Courses

Two courses selected from 1301, 1401, 3001

Major Requirements

Minimum of 36 cr with grades of C or better in courses numbered above 3001, to include: at least one regional 5000 course, one topical course, one course in the history and philosophy of geography, and 3511 or 3531 or 3551.

Majors are required to complete at least one course in geography with a substantial field component. This may be a specifically designated field course, such as 3940; 5701; or 3950, when it focuses on a field project; or a geography course involving field work done for extra credit (X registration for 2 or 3 credits); or independent study, 3970, subject to approval by the student's major adviser.

Majors are required to prepare a senior project which may be completed in either a specific 3000- or 5000- level course in geography (or, on petition, in an allied field) or in a course of independent study. The project shall be agreed on in consultation with the student's adviser and the student shall consult with the adviser during its execution. With the adviser's approval, the project may be used also to satisfy the

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

departmental requirements for a field component in the student's study program. The effort for the project shall be at least that for a two-credit course of independent study. The completed project must be submitted for approval before the end of the second quarter prior to graduation. If the adviser judges the project to be of an unacceptable standard, revision will be required prior to graduation.

Majors may demonstrate proficiency in English composition through successful completion of any upper division writing course provided that the course be approved by the student's major adviser.

Majors are strongly advised to meet regularly with their advisers to plan coherent, focused programs, and are required to review their program with their advisers when they have completed 20 credits in the major.

B.S. Major Sequence

Required Preparatory courses

Two courses selected from 1301, 1401, 3001

Major Requirements

Minimum of 56 cr with grades of C or better in courses above 3001, to include at least 32 cr in geography, 3511 or 3531, and one additional course in geographical techniques, and at least one course in the history and philosophy of geography.

Geography majors seeking the B.S. degree are required to complete one of the following options or its equivalent on petition through the adviser: (1) Calculus through Math 1231 or 1331 or 1531H or 1621; (2) Stat 5021-5022 and Stat 5201; (3) CSci 3105-3106 or CSci 5101-5102.

Majors are required to complete at least one course in geography with a substantial field component. This may be a specifically designated field course, such as 5701; or 3950, when it focuses on a field project; or a geography course involving field work done for extra credit (X registration for 2 or 3 credits); or independent study, 3970, subject to approval by the student's major adviser.

Majors are required to prepare a senior project which may be completed in either a specific 3000- or 5000-level course in geography (or, on petition, in an allied field) or in a course of independent study. The project shall be agreed on in consultation with the student's adviser and the student shall consult with the adviser during its execution. With the adviser's approval, the project may be used also to satisfy the departmental requirements for a field component in the student's study program. The effort for the project shall be at least that for a two-credit course of independent study. The completed project must be submitted for approval before the end of the student's senior year. If the adviser judges the project to be of an unacceptable standard, revision will be required prior to graduation.

Majors may demonstrate proficiency in English composition through successful completion of any upper division writing course provided that the course be approved by the student's major adviser.

Majors are strongly advised to meet regularly with their advisers to plan coherent, focused programs, and are required to review their programs with their advisers when they have completed 20 credits in the major.

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

A minor in Geography is also available. Interested students should call Extension Counseling, 373-3905.

Joint Day/Extension Classes

You may register through Extension for many 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 373-3000 two weeks before mail registration for that quarter begins.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Geog 1973 GEOGRAPHY OF THE TWIN CITIES. 4 degree credits, \$3973, \$148.

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)

Fall Qtr Sec 1 **W**—6:20-8:50, AndH 230

Geog 3111 MINNESOTA. 4 degree credits, \$154. (IS)

Physical resources, population, and commercial production. (No prereq. A joint Day/Extension class)

Winter Qtr Sec 1 **T**—6:20-8:50, AndH 250, Borchert

Geog 3131 MIDDLE AMERICA. 4 degree credits, \$154.

Physical and human geography of Mexico, Central America, and the Antilles. Internal and external areal relationships. (No prereq. A joint Day/Extension class)

Spring Qtr Sec 1 **W**—6:20-8:50, AndH 230, Barrett

Geog 3331 INTRODUCTION TO ECONOMIC GEOGRAPHY. 4 degree credits, \$154.

World patterns of economic activity; levels of development; appraisal of resources, production, circulation, and consumption; principles, models, and planning of economic behavior. (No prereq. A joint Day/Extension class)

Spring Qtr Sec 1 **T**—6:20-8:50, BlegH 415, Sheppard

Geog 3345 ENERGY AND MINERALS. 4 degree credits, \$154.

Sources, production, circulation, and consumption of power, metals, and nonmetallic minerals. Problems of exhaustion, substitution, pollution, costs, trade, and policy. National and local case studies. (No prereq. A joint Day/Extension class)

Fall Qtr Sec 1 **T**—6:20-8:50, BlegH 440, R Adams

Geog 3371 INTRODUCTION TO URBAN GEOGRAPHY. 4 degree credits, \$154.

Character, distribution, and development of cities in present-day world. Internal and external locational relationships. (No prereq. A joint Day/Extension class)

Winter Qtr Sec 1 **MW**—6:20-8, BlegH 440, J Adams

★Geog 3511 INTRODUCTION TO CARTOGRAPHY. 5 degree credits, \$192.50.

Principles of map design, compilation, specification, and drafting. Map symbols. History of cartography. Projections—analysis of construction, properties, and uses. (Prereq 5 cr in geography or #. A joint Day/Extension class limited to 5 Extension students)

Spring Qtr Sec 1 **M—Lect**, 6-7:45, BlegH 415, Andrews
M—Rec, 8-9:45, BlegH 455

Sec 2 **M—Lect**, 6-7:45, BlegH 415, Andrews
T—Rec, 3:15-5, BlegH 455

Geog 3973 GEOGRAPHY OF THE TWIN CITIES. 4 degree credits, \$1973, \$154.

See 1973 for description. (No prereq. Meets concurrently with 1973. A joint Day/Extension class)

Fall Qtr Sec 1 **W**—6:20-8:50, AndH 230

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

●**Geog 8020 SEMINAR: ECONOMIC GEOGRAPHY.** 1-3 degree credits, \$85 per credit.
(Prereq #. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class)

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

Winter Qtr Sec 2 **T**—6:20-8:50, BlegH 430, Sheppard

●**Geog 8340 SEMINAR: LAND USE PLANNING.** 1-3 degree credits, \$85 per credit.
(Prereq #. Open only to students admitted to the University of Minnesota Graduate School. A joint Day/Extension class)

Spring Qtr Sec 1 **T**—7-9, BlegH 445, Borchert

Geology and Geophysics (Geo)

Institute of Technology

Textbooks for most Geo courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

(See also IC 0263, Minnesota Geology: An Introduction to Your Surroundings; and IC 0265, Introduction to Coral Reefs)

E. Calvin Alexander, Associate Professor of Geology and Geophysics

Robert E. Sloan, Professor of Geology and Geophysics

Paul W. Weiblen, Professor of Geology and Geophysics

Geo 1001 PHYSICAL GEOLOGY. 5 degree credits, \$185. (IS)

A first course in geology for science majors and an introduction to scientific methods and the nature of the earth for others. Survey of the main features of the physical world and of the processes that have evoked them. (No prereq. Meets concurrently with 5051)

Fall Qtr Sec 1 **Lect T**—6:30-9, PillsH 110, Weiblen

Lab Th—7-9, FordH 185

Geo 1001 is also offered as a Television Course. See page 551.

Geo 1002 HISTORICAL GEOLOGY. 4 degree credits, \$148 plus \$1.50 course fee. Total \$149.50.

Evolution of the earth from its origin to the present, with special attention to the succession of physical and biological events of the past 600 million years. (Prereq 1001. Meets concurrently with 5052)

Spring Qtr Sec 1 **Lect T**—6:30-9, PillsH 110, Sloan

Lab Th—7-9, FordH 185

Geo 5051 PHYSICAL GEOLOGY FOR TEACHERS. 4 degree credits, \$1001, 1003, 1111. \$186.

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. Meets concurrently with 1001)

Fall Qtr Sec 1 **Lect T**—6:30-9, PillsH 110, Weiblen

Lab Th—7-9, FordH 185

Geo 5051 is also offered as a Television Course. See page 551.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Geo 5052 HISTORICAL GEOLOGY FOR TEACHERS. 4 degree credits, \$1002, 1004, 1112. \$186 plus \$1.50 course fee. Total \$187.50.

An introduction to the origin of the earth, the physical evolution of its crust through geological time and the biological changes that occurred during its history. (Prereq 1001 or 1111 or 5051 or #; only for students holding degrees in education. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 1002)

Spring Qtr Sec 1 **Lect T**—6:30-9, PillsH 110, Sloan
Lab Th—7-9, FordH 185

Geo 5314 GEOCHRONOLOGY. 4 degree credits, \$186.

The theory and practice of radioactive dating. Emphasis is on K/Ar, Rb/Sr and U, Th/Pb method as applied to geologic problems. Detailed study of the use of isotopic tracer techniques in crust-mantle evolution, igneous processes, and the early history of the earth. (Prereq 5312 or #. Qualified students may register for graduate credit at the University of Minnesota)

new

Winter Qtr Sec 1 **T**—6:30-9, PillsH 110, Alexander

German (Ger)

College of Liberal Arts

(See also Dutch)

Textbooks for most Ger courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

Friedrich Achberger, Associate Professor

Christoph Griesshaber, Lecturer

Anatoly Liberman, Professor

Thomas G. Plummer, Associate Professor

Ingo Schwarz, Visiting Assistant Professor

Wolfgang Taraba, Professor

Ray Wakefield, Assistant Professor

Gerhard H. Weiss, Professor

Read about language laboratories on page 56.

The following nonlanguage classes may be applied toward the CLA second language requirement, Route II (see page 562): Ger 3603, 3604, 3610, 3641, Hist 3631, 3632, 3633.

BEGINNING GERMAN

Beginning students of German have two course sequences available. Ger 1101-1102-1103-1104-1105 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. Students are encouraged to select the sequence which best fits their schedules and working habits.

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 376-3000 two weeks before mail registration for that quarter begins.

(See also IC 0930 Music Festivals of Austria; and IC 0583, German for Travelers)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★Ger 1101-1102-1103-1104-1105 **BEGINNING AND INTERMEDIATE GERMAN: CLASSROOM READING, LISTENING, WRITING, SPEAKING.** \$1010, 1110, 1201, 1210. 5 degree credits each term for 1101-1102-1103-1104, \$185 each term. 4 degree credits for 1105, \$148. (IS)

Early emphasis on structure. Language skills emphasized sequentially as follows: Listening, reading, and writing in 1101-1102-1103, then speaking in 1104-1105. (No prereq for 1101; 1101 or 5 cr of 1110 or 1 year high school German for 1102; 1102 or 10 cr of 1110 or 2 years high school German for 1103; 1103, 15 cr of 1110, or 3 years high school German for 1104; 1104 or 4 years high school German for 1105. Limited to 30)

Fall Qtr	1101	Sec 1	MTTh —5:45-7, FolH 105, Schwarz
	1101	Sec 2	MTTh —5:45-7, Arch 20
	1103	Sec 3	MTh —6:20-8:30, FolH 110
Fall Sem	1101	Sec 4	M —6:20-9:20, FolH 209, Weiss
Winter Qtr	1102	Sec 5	MTTh —5:45-7, FolH 105
	1104	Sec 6	MTh —6:20-8:30, FolH 107, Taraba
Spring Sem	1102	Sec 7	M —6:20-9:20, FolH 110, Weiss
Spring Qtr	1103	Sec 8	MTTh —5:45-7, FolH 207
	1105	Sec 9	MTh —6:20-8:15, FolH 304, Taraba

★Ger 1110 **BEGINNING GERMAN: INDIVIDUALIZED READING, LISTENING, WRITING.** 3 degree credits (15 credits maximum), \$111 each quarter.

Individualized instruction covering structure, writing, and comprehension. Students work at own pace with book, computer, audio- and videotapes, earning credit as they progress through material. Teachers available for consultation and testing. Two weeks after the end of the quarter, students who have completed more than 3 credits during the quarter should come in to the 101 Wesbrook Hall Registration Office to pay for the additional credits they have earned during that quarter. The continuation course is 1104. (No prereq. Limited to 75)

Fall Qtr	Sec 1	W —6:20-8:50, WaLib 111, Plummer
Winter Qtr	Sec 2	W —6:20-8:50, WaLib 111, Wakefield
Spring Qtr	Sec 3	W —6:20-8:50, WaLib 111, Wakefield

★○Ger 3011 **CONVERSATION AND COMPOSITION.** 4 degree credits, \$154.

Spoken German; composition; development of vocabulary; grammar review. (Prereq 1105. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr	Sec 1	TTh —5:15-6:30, FolH 203, Griesshaber
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★○Ger 3021 **BUSINESS GERMAN.** 4 degree credits, \$154.

Course will stress oral and written command of the language used by German business and industry. Students will read and discuss German business journals, will learn the basic format of business and other formal letters and the preparation of reports. (Prereq 1105 or equivalent. A joint Day/Extension class limited to 15 Extension students)

Winter Qtr	Sec 1	W —6:20-8:50, FolH 305, Griesshaber
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Ger 3603 **GERMAN LITERATURE IN TRANSLATION: MODERN LITERATURE.** 4 degree credits, \$154. (♦\$77)

Representative works from the modern period, related to other literatures. **Not open for credit toward a major or minor in German.** Requires no knowledge of German. (No prereq. May be applied toward the CLA second language requirement, Route II [see page 562])

Spring Qtr	Sec 1	MW —6:15-7:45, FolH 105
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Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Ger 3604 GERMAN LITERATURE IN TRANSLATION AND THE FILM. 4 degree credits, \$154 plus \$10 course fee. Total \$164. (♦\$77 plus \$10 course fee. Total \$87)

Examination of literary works and films as separate but related art forms. The premise that a history of a people is reflected in its art underlies the broad aims of the course: the analysis of the irrational in modern German culture, attitudes toward authority and violence, expressions of guilt, and the plight of the artist. Films range from accounts of Dracula to the talkies of Peter Lorre and Marlene Dietrich, from Nazi documentaries to recent avant-garde cinema. Readings include works from such authors as Thomas Mann, Franz Kafka, Günter Grass, and Peter Weiss. Requires no knowledge of German. **May be taken for credit toward major or minor in German by doing a portion of the reading in German.** (No prereq. May be applied toward the CLA second language requirement, Route II [see page 562])

Winter Qtr Sec 1 T—6:20-9:40, MoosT 2-520

Ger 3610 THE MEDIEVAL MIND: A DISTANT CULTURE, A DIFFERENT CONSCIOUSNESS. 4 degree credits, \$154 (♦\$77)

Medieval thoughts about men, women, God, art, life, and death. The class delves into the Germanic age, the feudal-Christian age, the crusades, and the courtly age. Readings include English translations of modern German Arthurian romance, heroic epics, and court poetry. **Not open for credit toward a major or minor in German.** (No prereq. May be applied toward the CLA second language requirement, Route II [see page 562])

Fall Qtr Sec 1 TTh—6:15-7:45, FolH 107, Wakefield

Ger 3641 INTRODUCTION TO GERMAN FOLKLORE. 4 degree credits, \$154. (♦\$77)

The traditional folklore genres; charms (magic), legends, fairy tales, ballads. **Not open for credit toward a major or minor in German.** Requires no knowledge of German. (No prereq. May be applied toward the CLA second language requirement, Route II [see page 562])

Spring Qtr Sec 1 TTh—6:15-7:45, FolH 50, Liberman

★Ger 5011 ADVANCED COMPOSITION AND CONVERSATION. 4 degree credits, \$154.

(Prereq 3013 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 MW—4:15-5:45, FolH 203, Achberger

Ger 5510 TOPICS IN CONTEMPORARY GERMAN CULTURE. 4 degree credits, \$154.

A single topic of modern German culture explored in depth. Taught in German. The topic will be announced before registration begins; contact the German Department (373-2624) for the topic title. (Prereq 3513 or equivalent. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 MW—4:15-5:45, FolH 209

Reading German

Ger 0221 and 0222 are specifically designed for individuals who desire only a reading knowledge of the language. The German language requirement for an advanced degree may also be satisfied by a program of study based on Ger 0221 and 0222. Students may take a final examination at the conclusion of Ger 0222. If the student achieves a grade of "B" or better in this examination and the course is taken on an A-N basis, the German Department will certify to the Graduate School a reading knowledge of German. Graduate students should check with their advisers for specific language requirements in their field of study.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Ger 0221 READING GERMAN. No credit, \$148.

This course is designed to help students acquire a reading knowledge of basic German as rapidly as possible. Ger 0221 assumes no knowledge of German on the part of the student. Grammar is reduced to an essential minimum. The course progresses from intensive reading of simple, graded material to selections of moderate difficulty. Vocabulary building and analysis of compound words are emphasized. **Must be taken S-N.** (No prereq)

Fall Sem Sec 1 M—6:20-8:30, CivMinE 213

Ger 0222 READING GERMAN. No credit, \$148.

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. The German Department will certify to the Graduate School a reading knowledge of German for those taking the final examination and achieving a grade of "B" or better. (Prereq 0221 or 2 quarters of beginning German or 2 years of high school German)

Spring Sem Sec 1 M—6:20-8:30, FolH 209

German 0221 and 0222 are also offered as Summer Evening Extension Classes.

FALL QUARTER IN AUSTRIA

German in Graz: Fall quarter in Graz, Austria, cosponsored by the Department of German, the Center for Austrian Studies, and Extension Classes Office of Study Abroad. Intensive German language instruction, culture courses, and field trips. May apply to the CLA second language requirements (see page 562). (12 to 13 credits.) **For information:** call Extension Classes Office of Study Abroad at 376-5049.

Greek (Grk)

College of Liberal Arts

Textbooks for most Grk courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

(See also Modern Greek [following this listing], Classics and Latin)

Jackson Hershbell, Professor of Classical Studies

The following nonlanguage classes may be applied toward the CLA second language requirement, Route II (see page 562): Clas 1042, 3145, 5145; and Phil 3001.

Grk 1101-1102†-1103 BEGINNING CLASSICAL GREEK: INDIVIDUALLY PACED. 5 degree credits each quarter, \$3051-3052†, \$185 each quarter. **(IS 1101)**

The emphasis is 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

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

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	1101	Sec 1	T—6:20-8:50, FolH 305, Hershbell
	1102	Sec 2	T—6:20-8:50, FolH 305, Hershbell
	1103	Sec 3	T—6:20-8:50, FolH 305, Hershbell
Winter Qtr	1101	Sec 4	T—6:20-8:50, FolH 305, Hershbell
	1102	Sec 5	T—6:20-8:50, FolH 305, Hershbell
	1103	Sec 6	T—6:20-8:50, FolH 305, Hershbell

Grk 1104 GREEK READINGS. 5 degree credits, \$3051-3052†, \$185.

Continuation of the **individually paced** *Cambridge Ancient Greek* course of study which is used in the Grk 1101-1102†-1103 sequence described above. Extended readings from Homer's *Iliad* (books 6 and 22) and the *Histories* of Herodotus (books 1 and 7). (Prereq 1103 or 2 yrs high school Greek or Δ. Meets concurrently with 1101-1102-1103)

Fall Qtr	Sec 1	T—6:20-9:50, FolH 305, Hershbell
Winter Qtr	Sec 2	T—6:20-9:50, FolH 305, Hershbell

Greek, Modern (MdGk)

College of Liberal Arts

Textbooks for most MdGk courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

(See also Foreign Study; and the Greek listing above)

Soterios Stavrou, Adjunct Instructor in Classical Studies
Theofanis Stavrou, Professor of History, Modern Greek Studies, Classical Studies

MdGk 1101-1102-1103 BEGINNING MODERN GREEK. 5 degree credits each quarter, \$FoSt 3001-3002-3003, \$185 each quarter.

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 FoSt 3001-3002-3003)

Fall Qtr	1101	Sec 1	Th—6:20-8:50, FolH 108, Stavrou
Winter Qtr	1102	Sec 2	Th—6:20-8:50, FolH 108, Stavrou
Spring Qtr	1103	Sec 3	Th—6:20-8:50, FolH 108, Stavrou

MdGk 1104-3105-3106 INTERMEDIATE MODERN GREEK. 5 degree credits each quarter, \$FoSt 3004-3005-3006, \$185 for 1104, \$192.50 each quarter for 3105 and 3106.

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. (Prereq 1103 or equiv for 1104; 1104 or equiv for 3105; 3105 or equiv for 3106. Meets concurrently with FoSt 3004-3005-3006)

Fall Qtr	1104	Sec 1	M—6:20-8:50, FolH 108, Stavrou
Winter Qtr	3105	Sec 2	M—6:20-8:50, FolH 108, Stavrou
Spring Qtr	3106	Sec 3	M—6:20-8:50, FolH 108, Stavrou

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

H

Health

(See School Health Education; Public Health)

Health Sciences

Please see the following alphabetical listings for course offerings:

ADULT PSYCHIATRY
ANATOMY
BIOCHEMISTRY
BIOLOGICAL SCIENCES
CHILD AND ADOLESCENT
PSYCHIATRY
FAMILY PLANNING
ADMINISTRATION
FAMILY PRACTICE AND COMMUNITY HEALTH
GENERAL COLLEGE
HEALTH SCIENCE UNITS
HISTORY OF MEDICINE AND TECHNOLOGY
HOSPITAL ADMINISTRATION
LABORATORY MEDICINE
MICROBIOLOGY
NURSING
PHARMACOGNOSY
PHYSIOLOGY
PHYSICAL MEDICINE AND
REHABILITATION
PUBLIC HEALTH

Health Science Units (HSU)

Health Sciences

Textbooks for most HSU courses are available at the Health Sciences Bookstore (376-4007)

Gary T. Athelstan, Professor
James Ayers, Assistant Professor
L. Peter Bast, Assistant Professor
Carol A. Carrier, Assistant Professor
Miriam Cohn, Professor
Nancy M. Crewe, Associate Professor
John Eyler, Associate Professor
Burton W. Galle, Assistant Professor
Floyd Garetz, Professor
David Garloff, Director, Health Sciences Learning Resources
Judith Garrard, Associate Professor
Lael Gatewood, Associate Professor

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Ilene B. Harris, Resident Associate
James Kincannon, Associate Professor, Health Education
Noel Larson, Psychotherapist
Michael Loupe, Associate Professor
James W. Maddock, Adjunct Associate Professor
Edna Maneval, Editor III
Manfred Meier, Professor
James Rothenberger, Instructor
Robert W. Schwanke, Associate Professor
Robert C. Slater, Professor
William R. Terrell, Adjunct Instructor
W. Wesley Tennyson, Professor

HSU 3003 FUNDAMENTALS OF ALCOHOL AND DRUG ABUSE. 2 degree credits, \$PubH 3003, \$99.50.

See PubH 3003 for description. (No prereq. Meets concurrently with 5032, PubH 3003, 5003)

Spring Qtr Sec 1 **Th**—6:30-8:30, HSUnitF 2-120, 2-130, Kincannon

HSU 5001 INTERDISCIPLINARY TEAM TRAINING IN HEALTH SERVICES DELIVERY. 3 degree credits, \$PubH 5013, SW 5013, \$149.25.

See PubH 5013 for course description. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with PubH 5013, SW 5013. A joint Day/Extension class)

Winter Qtr Sec 1 **W**—6:10-9:10, MoosT 2-585, 2-571, Schwanke, Cohn

HSU 5008 SOCIAL AND PSYCHOLOGICAL ASPECTS OF PHYSICAL DISABILITY. 4 degree credits, \$199.

(No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **TTh**—4:15-6, PWB 2-470, Crewe, Athelstan

HSU 5008 is also offered as a Television Course. See page 551.

HSU 5009 MULTIDISCIPLINARY PERSPECTIVES ON AGING. 4 degree credits, \$CPsy 5305, Educ 5440, PA 5671, SW 5024, Soc 5960, Phar 5009, PubH 5646, \$199.

See course description for Soc 5960. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Phar 5009, PA 5660, Educ 5440, Soc 5960, SW 5024. A joint Day/Extension class)

Fall Qtr Sec 1 **MW**—4:15-6, MoosT 2-620

HSU 5009 is also offered as a Television Course. See page 551.

HSU 5011 THE TEACHING-LEARNING PROCESS IN THE HEALTH CARE SETTING. 3 degree credits, \$PubH 5064, \$149.25.

(No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **M**—3:15-6, MoosT 2-571, 2-585, Garloff

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

OHHSU 5013 SYSTEMS APPROACH TO THE DESIGN OF INSTRUCTION. 3 degree credits, \$CISy 5201, \$149.25.

See CISy 5201 for course description. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class. Sec 1 meets concurrently with CISy 5201 Sec 1)

Fall Qtr Sec 1 T—4:15-6, EdHAn 64, Carrier

OHHSU 5017 WRITTEN COMMUNICATION SKILLS FOR HEALTH PROFESSIONALS. 4 degree credits, \$199.

Students examine numerous medical papers, learning to distinguish between good and bad writing. Major faults of writing and how to make necessary corrections are presented. Short presentations are followed by correlated small group work sessions. How to identify who you are writing for, and work on problems of organization, style, clarity of presentation, conciseness, and transition. Sexism in medical writing, abstract writing, ethics, grant proposal writing, mechanics, and use of illustrations are included. Students submit a paper suitable for publication. (Prereq knowledge of medical terminology. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 W—6:15-9, MoosT 2-571, 2-585, Maneval, Garloff

OHHSU 5018 COMPUTER APPLICATIONS FOR HEALTH PROVIDERS. 3 degree credits, \$LMed 5346, \$149.25 (1 additional credit available for computer project, \$49.75).

See LMed 5346 for course description. (Prereq health professional or student in health care discipline. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class. Meets concurrently with LMed 5346)

Winter Qtr Sec 1 T—4:15-7, MoosT 2-620, Gatewood

***OHHSU 5019 THE RIGHTS OF CHILDREN AND YOUTH: ABUSE AND NEGLECT.** 4 degree credits, \$PubH 5616, \$199.

See PubH 5616 for course description. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with PubH 5616. A joint Day/Extension class limited to a combined total of 100)

Spring Qtr Sec 1 MW—4:15-6, MoosT 2-650, tenBensel

OHHSU 5021 HEALTH CARE FOR THE ELDERLY. 3 degree credits, \$149.25.

(No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 MW—4:15-6, HSUnitF 2-110, 2-140, Meier

OHHSU 5022 HEALTH SCIENCES EDUCATION IN THE 20TH CENTURY. 3 degree credits, \$PubH 5850, \$149.25.

See PubH 5850 for course description. **Continuing Education Units (CEUs) also available.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with PubH 5850. A joint Day/Extension class)

Spring Qtr Sec 1 W—4:15-6, MoosT 2-571, 2-585, Garrard, Eyer, Harris, Loupe

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

OHU 5025 HUMAN SEXUALITY FOR HEALTH AND HELPING PROFESSIONALS I. 3-4 degree credits, §PubH 5021, §FSoS 5240, §SW 5021, \$49.75 per credit.

See PubH 5021 for course description. (Prereq enrollment in a graduate program in PubH, SW, FSoS, or Education; written # for all others. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with PubH 5021, SW 5021 sec 1. A joint Day/Extension class)

Fall Qtr Sec 1 **Th**—5:15-7:30, MoosT 2-620, Larson, Terrell, Maddock

OHU 5026 PROGRAM EVALUATION IN HEALTH AND MENTAL HEALTH SETTING. 4 degree credits, §PubH 5852, \$199.

(Prereq health student. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **MW**—2:15-4, MoosT 2-571, 2-585, Garrard

OHU 5027 HUMAN SEXUALITY FOR THE HEALTH AND HELPING PROFESSIONALS II. 3 degree credits, §PubH 5022, §SW 5022, §FSoS 5240, \$149.25.

See PubH 5022 for course description. (Prereq 5025 or PubH 5021 or SW 5010 sec 1; written # for all others. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with PubH 5022, SW 5022. A joint Day/Extension class)

Winter Qtr Sec 1 **Th**—5:15-7:30, MoosT 2-530, Maddock, Larson

OHU 5028 HUMAN SEXUALITY FOR THE HEALTH AND HELPING PROFESSIONALS III. 3 degree credits, §PubH 5023, §FSoS 5240, §SW 5023, \$149.25.

See PubH 5023 for course description. (Prereq 5027 or PubH 5022 or SW 5010 sec 2; written # for all others. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with PubH 5023, SW 5023. A joint Day/Extension class)

Spring Qtr Sec 1 **Th**—5:15-7:30, MoosT 2-690, Maddock, Terrell

HSU 5029 HUMANISTIC CASE STUDIES IN HEALTH CARE. 3 degree credits, §Phar 5305, §Engl 5910, \$149.25.

See Engl 5910 for course description. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Engl 5910 and Phar 5305)

Winter Qtr Sec 1 **Th**—4:15-6, HSUnitF 2-110, Galle

OHU 5030 HUMANITIES AND AGING. 2 degree credits, §Phar 5008, \$99.50.

An examination of aging—through the perspectives of literature, music, art, philosophy, and history. Discussion will focus on such topics as the historical experience of today's elderly cohort, paternalism, generational conflict, cross-cultural ceremonies of aging, and changing attitudes toward the elderly in America. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Phar 5008. A joint Day/Extension class)

Spring Qtr Sec 1 **W**—4:15-6, HSUnit F 2-120, 2-130, Galle

OHU 5031 BIOLOGY OF AGING. 2 degree credits, §Dent 5070, §Phar 5007, \$99.50.

The class will follow a lecture/discussion format under the direction of 4 or 5 faculty members. Registered students will be given readings to complete before the course begins. (No prereq. 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, HSUnitF 2-120, 2-130, Galle

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

HSU 5032 FUNDAMENTALS OF ALCOHOL AND DRUG PROBLEMS. 2 degree credits, \$PubH 5003, \$99.50.

See PubH 3003 for description. (Prereq sr or grad. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3003, PubH 3003, 5003)

Spring Qtr Sec 1 **Th**—6:30-8:30, HSUnitF 2-120, 2-130, Kincannon

OHSU 5040 DYING AND DEATH IN CONTEMPORARY SOCIETY. 3 degree credits, \$PubH 5040, \$Mort 5040, \$149.25.

(Prereq Health Science major, School of Public Health major, education senior, Mortuary Science major, or written #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **M**—4:15-6, JacH 2-135

W—4:15-5, JacH 2-135, Rothenberger, Slater, Burger

OHSU 5210 TERMINOLOGY OF THE HEALTH SCIENCES. 2 degree credits, \$Phar 5210, \$99.50.

An independent study course which meets biweekly for tests. Day and time for tests arranged at the beginning of each term (call 373-9146). No lectures or formal class sessions other than test periods, but conference hours are available for informal discussion. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Phar 5210. A joint Day/Extension class)

Fall Qtr Sec 1 **Arr** (call 373-9146), Bast, Anderson

Winter Qtr Sec 2 **Arr** (call 373-9146), Bast, Anderson

Spring Qtr Sec 3 **Arr** (call 373-9146), Bast, Anderson

Health, Environmental

(See Public Health)

Hebrew

(See Ancient Near Eastern and Jewish Studies)

Higher Education (HiEd)

College of Education

(Department of Educational Policy and Administration)

S.M. Clark, Professor

C.P. Hooker, Professor

J.R. Rest, Professor

★**OHiEd 5250 AMERICAN HIGHER EDUCATION.** 4 degree credits, \$EdAd 5250, \$Educ 5250, \$189. See EdAd 5250 for description. (No prereq. **S-N optional.** Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with EdAd 5250. A joint Day/Extension class limited to 10 Extension students)

Fall Qtr Sec 1 **W**—3:15-5, BuH 240, Clark

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**OHied 5292 THE LAW AND POSTSECONDARY EDUCATIONAL INSTITUTIONS.** 3 degree credits, \$EdAd 5292, \$141.75.

Analysis of court opinions and Federal regulations affecting postsecondary educational institutions. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with EdAd 5292. A joint Day/Extension class limited to 10 Extension students)

Winter Qtr Sec 1 **Th**—4:15-6, BlegH 330, Hooker

★**OHied 5540 SEMINAR: THE COLLEGE STUDENT.** 3 degree credits, \$CSPP 5540, \$PsyS 5540, \$EPsy 5451. \$141.75.

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-N.** (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 10 Extension students)

Fall Qtr Sec 1 **M**—6:15-8:30, BuH 123, Rest

Hindi

(See Middle Eastern and South Asian Studies)

History (Hist)

College of Liberal Arts

Textbooks for most Hist courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450).

(See also General College social and behavioral science courses; noncredit Informal Courses; History of Medicine; History of Science; and Religious Studies)

Josef L. Altholz, Professor of History
Bernard S. Bachrach, Professor of History
Paul W. Bamford, Professor of History
Hyman Berman, Professor of History
Kinley J. Brauer, Professor of History
George Green, Associate Professor of History
Thomas Kelly, Professor of History
David Kopf, Professor of History
David Lelyveld, Associate Professor of History
Byron K. Marshall, Professor of History
John Kim Munholland, Professor of History
David W. Noble, Professor of History
Richard Rudolph, Professor of History
Joel Samaha, Professor of History
Theofanis G. Stavrou, Professor of History
Fred Suppe, Instructor in History
John Thayer, Professor of History
James D. Tracy, Professor of History
William E. Wright, Professor of History

Read about abbreviations, symbols, and maps on page 60.
 Courses and sections in red have limits on enrollment. See page 20.

A MAJOR IN HISTORY CAN BE COMPLETED IN THE EVENING.

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

B.A. Major Sequence.

Required Preparatory Courses

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. Language Requirement Route I; or Route II.

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 Extension Counseling, 373-3905.

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 376-3000 two weeks before mail registration for that quarter begins.

Hist 1001, 1002, 1003 INTRODUCTION TO MODERN EUROPEAN HISTORY SINCE THE MIDDLE AGES. 4 degree credits each quarter, \$3001, 3002, 3003, \$148 each quarter. (♦\$74 each quarter) (IS)

1001: Western European civilization to 1715. **1002:** Revolution, liberalism, and nationalism to 1870. **1003:** 1870 to recent times. (No prereq. Meet concurrently with 3001, 3002, 3003)

Fall Qtr 1002 Sec 1 **W**—6:20-8:50, MechE 221, Wright

Winter Qtr 1003 Sec 2 **W**—6:20-8:50, AndH 310, Wright

Spring Qtr 1001 Sec 3 **Th**—6:20-8:50, AndH 330, Thayer

Hist 1101 INTRODUCTION TO MEDIEVAL HISTORY. 4 degree credits, \$148. (♦\$74) (IS)

Europe from the decline of Rome to the early Renaissance: politics, institutions, society, economy, and culture of the Middle Ages. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, BlegH 210, Bachrach

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Hist 1301, 1302 AMERICAN HISTORY. 4 degree credits each quarter. \$148 each quarter. (◆\$74) (IS)

Survey of political, economic, and social history of the United States with emphasis on forces that resulted in the emergence of Modern America. **1301:** Colonial, early national period from the Revolution through Civil War and Reconstruction. **1302:** Modern America from 1880 to the present. (No prereq)

Fall Qtr 1301 Sec 1 **W**—6:20-8:50, AndH 370, Berman

Spring Qtr 1302 Sec 2 **Th**—6:20-8:50, AndH 350, Green

Hist 1301 is also offered as a Radio course. See page 551.

Hist 1422 THE WORLD AND THE WEST. 4 degree credits, \$3422, \$148. (◆\$74)

Survey of the political, economic, and cultural interaction between the peoples of Europe, Africa, America, and Asia. Modern world of renaissance, nationalism, modernization and countermodernization, 1850 to present. (No prereq. Meets concurrently with 3422)

Fall Qtr Sec 1 **Th**—6:20-8:50, BlegH 235, Kopf

Hist 1451 SURVEY OF CIVILIZATIONS IN ANCIENT ASIA. 4 degree credits, \$3451, 1451H, \$148. (◆\$74) (IS)

A comparative approach to the birth of civilizations in East, South, and West Asia; the ethical protest of Confucius, Buddha, Zoroaster, and others; the rise of the universal empires of the Han, Mauryans, Guptas, Achaemenids, and Sasanids. (No prereq. Meets concurrently with 3451)

Winter Qtr Sec 1 **Th**—6:20-8:50, BlegH 440, Kopf

Hist 1463 INTRODUCTION TO EAST ASIA IN MODERN TIMES. 4 degree credits, \$3463, \$EAS 1463, \$148. (◆\$74)

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. May be applied toward the CLA second language requirement, Route II, for Chinese and Japanese [see page 562]. Meets concurrently with 3463, EAS 1463)

Fall Qtr Sec 1 **T**—6:20-8:50, BlegH 205, Marshall

Hist 3001, 3002, 3003 INTRODUCTION TO MODERN EUROPEAN HISTORY SINCE THE MIDDLE AGES. 4 degree credits each quarter, \$1001, 1002, 1003, \$154 each quarter.

See course description for Hist 1001, 1002, 1003. (No prereq. Meet concurrently with 1001, 1002, 1003)

Fall Qtr 3002 Sec 1 **W**—6:20-8:50, MechE 221, Wright

Winter Qtr 3003 Sec 2 **W**—6:20-8:50, AndH 310, Wright

Spring Qtr 3001 Sec 3 **Th**—6:20-8:50, AndH 330, Thayer

Hist 3020 TOPICS IN FAMILY HISTORY. 4 degree credits, \$154. (◆\$77)

Covers a wide range of topics: women, work, and family; United States and European comparative family history. (No prereq)

Spring Qtr Sec 1 **T**—6:20-8:50, BlegH 310

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Hist 3347 WOMEN IN COLONIAL AND VICTORIAN AMERICA: 1600-1890. 4 degree credits, \$154. (◆\$77)

The female experience in U.S. history to 1890: work, family, images, sexuality, feminism; impact of race and class. (No prereq)

CEW

Winter Qtr Sec 1 **T**—9:30 a.m.-12, MacP

Offered through Continuing Education for Women

Hist 3348 WOMEN IN MODERN AMERICA: 1890-1980. 4 degree credits, \$154. (◆\$77)

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)

CEW

Spring Qtr Sec 1 **Th**—9:30 a.m.-12, MacP

Offered through Continuing Education for Women

Hist 3422 THE WORLD AND THE WEST. 4 degree credits, \$1422, \$154.

See course description for Hist 1422. (No prereq. Meets concurrently with 1422)

Fall Qtr Sec 1 **Th**—6:20-8:50, BlegH 235, Kopf

Hist 3425 HISTORY OF MEXICO: THE 19TH AND 20TH CENTURIES. 4 degree credits, \$154. (◆\$77)

The struggle for land and liberty from the Hidalgo revolt to the age of oil. (No prereq. May be applied toward the CLA second language requirement, Route II, for Spanish [see page 562])

Spring Qtr Sec 1 **M**—6:20-8:50, AndH 250

Hist 3451 SURVEY OF CIVILIZATIONS IN ANCIENT ASIA. 4 degree credits, \$1451, 1451H, \$154. (IS)

See course description for Hist 1451. (No prereq. Meets concurrently with 1451)

Winter Qtr Sec 1 **Th**—6:20-8:50, BlegH 440, Kopf

Hist 3463 INTRODUCTION TO EAST ASIA IN MODERN TIMES. 4 degree credits, \$1463, SEAS 1463, \$154.

See description for Hist 1463. (No prereq. May be applied toward the CLA second language requirement, Route II, for Chinese and Japanese [see page 562]. Meets concurrently with 1463, EAS 1463)

Fall Qtr Sec 1 **T**—6:20-8:50, BlegH 205, Marshall

Hist 3468 PEOPLE'S REPUBLIC OF CHINA: THE COMMUNIST REVOLUTION, 1900 TO PRESENT. 4 degree credits, \$5468, SEAS 3468, \$154.

Introduction of Marxism to China, rise of Communist Party, and development of rural guerrilla movement. Career of Mao Tse-tung and developments in The People's Republic: The Great Leap, Cultural Revolution, Gang of Four. (No prereq. May be applied toward the CLA second language requirement, Route II, for Chinese [see page 562]. Meets concurrently with Hist 5468, EAS 3468)

Spring Qtr Sec 1 **T**—6:20-8:50, BlegH 330

Hist 3471 20TH-CENTURY JAPAN. 4 degree credits, \$5471, SEAS 3471, \$154. (◆\$77)

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. May be applied toward the CLA second

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

language requirement, Route II [see page 562]. Meets concurrently with 5471, EAS 3471)

Winter Qtr Sec 1 T—6:20-8:50, BlegH 10, Marshall

Hist 3505 SURVEY: THE MIDDLE EAST. 4 degree credits, \$MESA 3505, 5505, \$154. (◆\$77)

A survey of the lands and peoples of the Middle East, historical evolution of Middle East civilizations and societies, and the status of Middle East countries in world affairs. (No prereq. Meets concurrently with MESA 3505)

Fall Qtr Sec 1 M—6:20-8:50, BlegH 440

Hist 3509 MILITARY HISTORY OF THE ANCIENT WORLD. 4 degree credits, \$154. (◆\$77)

The conduct of war in the Ancient Near East, Greece and Rome, with special reference to the importance of warfare in the political development of ancient societies. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, BlegH 120, Kelly

Hist 3544 THE ARAB WORLD IN RECENT TIMES. 4 degree credits, \$MESA 3544, \$154. (◆\$77)

The central Arab lands (the Arabian peninsula, Iraq, Syria, Jordan, Lebanon, Egypt) and the North African region (Libya, Tunisia, Morocco, Algeria) from the end of World War I to the present. Foreign occupation and the struggle for independence; position in regional and international politics. (No prereq. May be applied toward the CLA second language requirement, Route II [see page 562])

Spring Qtr Sec 1 M—6:20-8:50, AndH 330

(See also IC 0927, Egypt of the Pharaohs)

Hist 3608 THE HISTORY OF THE CATHOLIC CHURCH IN THE MIDDLE AGES. 4 degree credits, \$154. (◆\$77)

The institutions, thought, and major personalities that dominated the church from the later Roman Empire to the Reformation. (No prereq)

Spring Qtr Sec 1 W—6:20-8:50, AndH 330, Bachrach

Hist 3609 MILITARY HISTORY OF MEDIEVAL WESTERN EUROPE. 4 degree credits, \$154. (◆\$77)

Concept and conduct of war in Western Europe in the Middle Ages and the relation between military organization and society. (No prereq)

Winter Qtr Sec 1 W—6:20-8:50, BlegH 210, Bachrach

Hist 3624 FRANCE FROM THE RENAISSANCE TO RICHELIEU. 4 degree credits, \$154. (◆\$77)

The religious wars and the growth of an absolute monarchy. (No prereq. May be applied toward the CLA second language requirement, Route II [see page 562])

Spring Qtr Sec 1 W—6:20-8:50, AndH 350, Tracy

Hist 3631 HISTORY OF GERMANY: AGE OF REFORM, 1348-1648. 4 degree credits, \$154. (◆\$77)

The population crisis and peasant life, German towns, Luther and the Reformation, peasant wars, rise of princely states, the Thirty Years War. (No prereq. May be applied toward the CLA second language requirement, Route II [see page 562])

Fall Qtr Sec 1 M—6:20-8:50, AndH 250, Tracy

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Hist 3632 HISTORY OF GERMANY: ABSOLUTISM AND REVOLUTION, 1648-1848. 4 degree credits, \$154. (◆\$77)

Postwar devastation, the politics of absolutism, baroque Germany, everyday life in town and country, the revolution of 1848. (No prereq. May be applied toward the CLA second language requirement, Route II [see page 562])

Winter Qtr Sec 1 **M**—6:20-8:50, RarigC 610, Tracy

Hist 3633 HISTORY OF GERMANY: EMPIRE TO HITLER, 1848-1945. 4 degree credits, \$154. (◆\$77)

Unification, political and economic development, growth of socialism, World War I and revolution, the Weimar years, the Nazi seizure of power. (No prereq. May be applied toward the CLA second language requirement, Route II [see page 562])

Spring Qtr Sec 1 **W**—6:20-8:50, RarigC 616, Rudolph

Hist 3681 MODERN IRISH HISTORY. 4 degree credits, \$154. (◆\$77)

History of Ireland since 1535 with emphasis on the period of the union with Britain, 1800-1922. (No prereq)

Fall Qtr Sec 1 **Th**—6:20-8:50, BlegH 115, Altholz

Hist 3700 TOPICS IN EUROPEAN HISTORY: IRISH HISTORY TO 1607. 4 degree credits, \$154. (◆\$77)

In-depth treatment of selected historical themes: the political, social, and cultural history of Ireland from St. Patrick to the "Flight of the Earls" in 1607. (No prereq)

Winter Qtr Sec 1 **M**—6:20-8:50, AndH 250, Suppe

Hist 3707, 3708 SOCIAL AND ECONOMIC HISTORY OF MODERN EUROPE. 4 degree credits each quarter, \$154 each quarter. (◆\$77 each quarter)

Transition from traditional rural to modernized urban society; economic and social change, social and revolutionary movements, changes in class, family, and sex roles. 3707: 18th and 19th centuries. 3708: Late 19th century to present. (No prereq)

Fall Qtr 3707 Sec 1 **W**—6:20-8:50, BlegH 440, Rudolph

Winter Qtr 3708 Sec 2 **W**—6:20-8:50, AndH 230, Rudolph

Hist 3722 EUROPE IN THE ERA OF WORLD WAR II. 4 degree credits, \$3224, \$154. (◆\$77) (IS)

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)

Winter Qtr Sec 1 **Th**—6:20-8:50, AndH 350, Munholland

Hist 3723 EUROPE SINCE WORLD WAR II. 4 degree credits, \$154. (◆\$77)

Reconstruction to European politics and society; emergence of cold war in Europe; decolonization; economic cooperation and development; East-West relations. (No prereq)

Spring Qtr Sec 1 **Th**—6:20-8:50, AndH 230, Munholland

Hist 3821 UNITED STATES IN THE 20TH CENTURY: 1896-1932. 4 degree credits, \$154. (◆\$77)

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

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

women's suffrage; social and cultural conflict in the 1920s; the coming of the Great Depression. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, AndH 350, Noble

Hist 3822 UNITED STATES IN THE 20TH CENTURY: 1932-1960. 4 degree credits, \$154. (◆\$77)

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 360, Berman

Hist 3823 UNITED STATES IN THE 20TH CENTURY: 1960-PRESENT. 4 degree credits, \$154. (◆\$77)

The conflicts of the 1960s; the New Frontier and Great Society; the black struggle for freedom; the Vietnam War; the new left and counter-culture; the women's movement and gay liberation; Watergate and the uncertainties of the 1970s; the Reagan counter-revolution. (No prereq)

Spring Qtr Sec 1 T—6:20-8:50, AndH 350, Noble

Hist 3845 AMERICAN ECONOMIC HISTORY, 1870 TO PRESENT. 4 degree credits, \$154. (◆\$77)

Farm problems in the 19th century. Rise of big business and finance capitalism. The 1920s economy and the Great Depression. Corporate capitalism, government policies, and modern society. (No prereq)

Fall Qtr Sec 1 Th—6:20-8:50, BlegH 205, Green

Hist 3883 HISTORY OF AMERICAN FOREIGN RELATIONS. 4 degree credits, \$154. (◆\$77)

American foreign relations during the Cold War, 1941 to present. (No prereq)

Spring Qtr Sec 1 Th—6:20-8:50, BlegH 155, Brauer

Hist 3910 TOPICS IN AMERICAN HISTORY: ISSUES IN 20TH-CENTURY CRIMINAL JUSTICE. 4 degree credits, \$154. (◆\$77)

Selected topics of interest to students of history and of civilization in the United States and its constituent elements. Topics deal with cultural, social, economic, and political concerns. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, Law 1, Samaha

★**Hist 3955 INTRODUCTION TO HISTORICAL RESEARCH.** 4 degree credits, \$154.

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 (Prereq Δ. Limited to 15)

Spring Qtr Sec 1 M—6:20-8:50, SocSci 307, Lelyveld

Hist 3961 MAJOR PAPER. 5 degree credits, \$192.50.

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, 614 SocSci on the West Bank campus. (Prereq Δ)

Winter Qtr Sec 1 T—6:20-8:50, BlegH 360, Green

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Hist 5211 FRANCE IN THE OLD REGIME. 4 degree credits, \$154. (◆\$77)

France to the Revolution of 1789. (No prereq. May be applied toward the CLA second language requirement, Route II [see page 562]. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6:20-8:50, SocSci 307, Bamford

Hist 5212 FRENCH REVOLUTION AND NAPOLEON. 4 degree credits, \$154. (◆\$77)

The reform movement and upheavals in France to 1799; the emergence and rise to power of Bonaparte; the Napoleonic regime. (No prereq. May be applied toward the CLA second language requirement, Route II [see page 562]. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—6:20-8:50, BlegH 440, Bamford

Hist 5231 MODERN FRANCE FROM 1848 TO DE GAULLE. 4 degree credits, \$154. (◆\$77)

Survey of French society and political life from the revolution of 1848 to contemporary times. (No prereq. May be applied toward the CLA second language requirement, Route II [see page 562]. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 Th—6:20-8:50, BlegH 260, Munholland

Hist 5264 MODERN RUSSIA: 18TH-CENTURY BACKGROUND. 4 degree credits, \$154. (◆\$77)

Foundation of the Russian empire, modernization and expansion under Peter the Great and Catherine the Great. Russia's Europeanization. (No prereq. May be applied toward the CLA second language requirement, Route II [see page 562]. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—6:20-8:50, BlegH 260, Stavrou

Hist 5265 MODERN RUSSIA: 19TH-CENTURY. 4 degree credits, \$154. (◆\$77)

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. May be applied toward the CLA second language requirement, Route II [see page 562]. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 M—6:20-8:50, BlegH 260, Stavrou

Hist 5266 MODERN RUSSIA: THE 20TH CENTURY. 4 degree credits, \$154. (◆\$77)

Fall of the Russian monarchy, revolutions, and Soviet regime. (No prereq. May be applied toward the CLA second language requirement, Route II [see page 562]. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 M—6:20-8:50, AndH 370, Stavrou

Hist 5468 PEOPLE'S REPUBLIC OF CHINA: THE COMMUNIST REVOLUTION, 1900 TO PRESENT. 4 degree credits, \$3468, SEAS 3468, \$154.

See course description for Hist 3468 (No prereq. May be applied toward the CLA second language requirement, Route II, for Chinese [see page 562]. Meets concurrently with Hist 3468, EAS 3468)

Spring Qtr Sec 1 T—6:20-8:50, BlegH 330

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Hist 5471 20TH-CENTURY JAPAN. 5 degree credits, §3471, SEAS 3471, \$192.50.

See description for 3471. (No prereq. May be applied toward the CLA second language requirement, Route II [see page 562]. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3471, EAS 3471)

Winter Qtr Sec 1 T—6:20-8:50, BlegH 10, Marshall

◆**Hist 5930 TOPICS IN COMPARATIVE THIRD WORLD HISTORY: ISRAEL AND PAKISTAN.** 4 degree credits, \$154.

Problems of religious identity and nationalism: ideological foundations, colonial contexts, politics of partition, role of super-power interests. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 M—5:30-8, BlegH 105, Lelyveld

History of Medicine (HMed)

Medical School

Most textbooks for HMed courses are available at the Health Sciences Bookstore (376-4007)

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 376-3000 two weeks before mail registration for that quarter begins.

History of Science and Technology (HSci)

College of Liberal Arts

Most textbooks for HSci courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

Peter Zetterberg, Lecturer

Roger H. Stuewer, Professor

HSci 1812 INTRODUCTION TO HISTORY OF SCIENCE: THE SCIENTIFIC REVOLUTION. 4 degree credits, §HSci 3812, \$148 (◆\$74) (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 T—6:20-8:50, Phys 210, Zetterberg

HSci 3812 INTRODUCTION TO HISTORY OF SCIENCE: THE SCIENTIFIC REVOLUTION. 4 degree credits, §HSci 1812, \$154.

See course description for 1812. (No prereq. Meets concurrently with 1812)

Fall Qtr Sec 1 T—6:20-8:50, Phys 210, Zetterberg

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

HSci 3825 PHYSICS AND SOCIETY IN 20TH-CENTURY AMERICA. 4 degree credits,
§HSci 5825, \$154 (◆\$77) (IS)

19th-century heritage; 20th-century discoveries and theories; growth of physics in America after World War I; the intellectual migration of the 1930s; the Manhattan project, and the atomic bomb; McCarthyism and Oppenheimer; current and past contributions of Minnesota physicists. (No prereq. Meets concurrently with 5825)

Spring Qtr Sec 1 T—6:20-8:50, Phys 210, Stuewer

HSci 5825 PHYSICS AND SOCIETY IN 20TH-CENTURY AMERICA. 4 degree credits,
§HSci 3825, \$154. (IS)

See course description for 3825. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3825)

Spring Qtr Sec 1 T—6:20-8:50, Phys 210, Stuewer

College of Home Economics

See the following alphabetical unit listings for course offerings in:

Design, Housing, and Apparel

Includes Commercial Art and Textiles and Clothing

Family Social Science

Includes Alcohol and Drug Counseling Education

Food Science and Nutrition

School of Social Work (Social Work)

Center for Youth Development and Research

(Youth Studies)

For information about credit courses given in suburban or out-state locations please write or call the College of Home Economics, 32 McNeal Hall, 1985 Buford Avenue, University of Minnesota, St. Paul, MN 55108; telephone (612) 373-0933.

Home Economics Education

(See Vocational and Technical Education)

Horticultural Science (Hort)

College of Agriculture

Textbooks for most Hort courses are available at Books Underground on the St. Paul campus (373-0800)

(See also Landscape Architecture; Botany; and Informal Courses)

Mervin Eisel, Assistant Professor of Horticultural Science

C.G. Hard, Professor of Horticultural Science

Leonard B. Hertz, Professor of Horticultural Science

P. E. Read, Professor of Horticultural Science

D. B. White, Professor of Horticultural Science

Harold F. Wilkins, Professor of Horticultural Science

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

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 376-3000 two weeks before mail registration for that quarter begins.

Hort 1010 HOME HORTICULTURE. 4 degree credits, \$148 (IS)

For non-horticulture majors. Applied knowledge of propagation and culture of fruits, vegetables, lawns, flowers, and house plants. Identification and use of trees and shrubs in the home landscape. Lectures and laboratory. (No prereq)

Fall Qtr Sec 1 T—6:10-9:30, HrG 172, StP Campus, Read

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.

See also Television Course, Hort 1010, Home Landscape Gardening, page 551.

★Hort 1021 WOODY PLANT MATERIALS. 4 degree credits, \$148.

Taxonomy, ecology, and landscape use of trees, shrubs, and evergreens. Lectures, laboratories, and field trips. (No prereq. Limited to 50)

Spring Qtr Sec 1 Th—6:10-9:30, AlderH 415, StP Campus

★Hort 1022 HERBACEOUS PLANT MATERIALS. 4 degree credits, \$148.

Taxonomy, ecology, and landscape use of perennial and annual flowers, tender and hardy bulbs, ground covers, vines, grasses, and selected plants for interior design. Lectures, laboratory, and garden experience. (No prereq. Limited to 50)

Spring Qtr Sec 1 T—6-9:20, Research and Education Bldg,
Minnesota Landscape Arboretum (West of
Rt 41 on Hwy 5) Chaska (Books
available at Arboretum Gift Shop)

★Hort 1036 PLANT PROPAGATION. 4 degree credits, \$148.

Principles and techniques of propagating plants by seeds, cuttings, grafts, buds, layers, and division. Lectures deal with principles while laboratories give students opportunity to practice various propagating techniques. Field trips. (Prereq 1010 or 1100, Biol 1103 or #. Limited to 50)

Winter Qtr Sec 1 W—6:10-9:30, HrG 172, StP Campus, Read

★Hort 3026 RESIDENTIAL LANDSCAPE DESIGN. 4 degree credits, \$194. (IS)

Principles of landscape design with special reference to their practical application in planning of residential landscapes. Relationships of landscape design, architectural design, and interior design. Landscape plans, landscape drafting techniques and methods of presentation. Lectures, drawings, and practical problems. (Prereq 1021, LA 1024, or professional design experience. Limited to 25)

Winter Qtr Sec 1 T—6:10-9:30, AlderH 415, StP Campus, Hard

(See also IC 0925, Gardens of the Delaware Valley)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Hort 3031 FRUIT SCIENCE. 3 degree credits, \$145.50 (♦\$72.75)

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. (Prereq 1010 or #)

Winter Qtr Sec 1 **W**—6:10-9:30, AlderH 415, StP Campus, Hertz

★**Hort 3077 FLORAL DESIGN.** 3 degree credits, \$145.50 plus \$25 course fee. Total \$170.50.

Fundamental principles in floral arrangement. Analysis of basic principles used in floral design. Decorative use of flowers, foliage and accessories. (No prereq. Limited to 30)

Fall Qtr Sec 1 **Th**—6:10-9:10, AlderH 423, StP Campus, Wilkins

★**Hort 5020 HORTICULTURAL TECHNIQUES FOR EDUCATION MAJORS.** 3 degree credits (no credit for Hort majors), \$145.50.

Horticultural and botanical concepts and their impact on the use of horticultural plants in the classroom. Development of specific single concept classroom demonstration and pupil-oriented activities relating to horticultural plants. (Prereq teacher, education major, 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 **W**—4:30-7, HrG 172, StP Campus, Read

★**Hort 5042 TURF GRASS SCIENCE.** 4 degree credits, \$194.

For advanced students in turf with career objectives in professional turf management. All phases of the turf industry considered, with emphasis on the ecology, physiology, and theory of turf population dynamics and on specialized management situations such as golf course, commercial sod production, and fine turf athletic situations. (Prereq 3072, PIPa 1001, PIPh 3131. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Winter Spec Term Sec 1 **T**—6:10-9:30, Feb. 5-Apr. 23 (12 meetings),
HrG 172, StP Campus, White
No late fee through Jan. 29

Hospital Administration

For information on noncredit conferences or workshops in hospital administration, please contact Vernon Weckwerth, C-304 Mayo; telephone 373-8052, or Deanna Mills, 376-1544.

Housing (Hsg)

College of Home Economics

(Department of Design, Housing, and Apparel)

Textbooks for most Hsg courses are available at the Books Underground Bookstore on the St. Paul campus (373-0800)

Evelyn Franklin, Assistant Professor of Housing
Becky Yust, Instructor in Housing

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

★OHsg 5301 **THE FAMILY AND ENERGY ISSUES.** 3 degree credits, \$FSoS 5301, \$147.
 Analysis of family behavior as it relates to energy use, the impact of scarce resources on the quality of family functioning, family/energy issues in the future. (Prereq 5 cr in FSoS or #. A joint Day/Extension class limited to 10)
Winter Qtr Sec 1 **TTh**—4-5:30, McNH 216, StP Campus, Yust

★OHsg 5561 (formerly Dsgn 5561) **HOUSING MANAGEMENT.** 5 degree credits, \$245.
 Focus on new career demands for professionalism in housing management. Emphasis on increasing interpersonal skills. Includes historical perspectives, current status of housing, management approaches, psychosocial impact of housing and community design, specific residential populations. (Prereq 1551 or 1552, 3563 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 **TTh**—4-6, McNH 212, StP Campus, Franklin

OHsg 5581 (formerly Dsgn 5581) **DESIGNED ENVIRONMENTS AND AGING.** 4 degree credits. **Tentatively scheduled for 1985-86.**

Humanities (Hum)

College of Liberal Arts

Most textbooks for Hum courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

(See also General College, Classics, Informal Courses, and American Studies)

*John Archer, Associate Professor of Humanities
 Alexandra Cromwell, Assistant Professor of Humanities
 Jackson Hershbell, Professor of Classics and Humanities
 George Kliger, Assistant Professor of Humanities
 Brenda Powell, Assistant Professor of Humanities
 Robert Tapp, Professor of Humanities*

A MAJOR IN HUMANITIES CAN BE COMPLETED IN THE EVENING.

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

B.A. MAJOR SEQUENCE

Major Requirements

- A. Humanities courses (minimum 49 cr), to include: 1301; six courses in the lower and upper division Western culture sequences (minimum two each in European Heritage and Modern World sequences [survey or topics]; minimum three in upper division topics courses); two courses in non-Western culture (see list of approved courses available in Humanities advisers' offices); one senior workshop and one proseminar; any two additional Hum courses.
- B. Concentration (minimum 16 cr): four 3xxx-5xxx courses relevant to your declared area of concentration, approved by your adviser, from liberal education departments and programs from approved list (see list of approved units in Humanities advisers' offices).

Up to five courses beyond Hum 1301 may be taken at the 1xxx level, with a maximum of three 1xxx-level courses from the European Heritage—Modern World sequences. Up to four courses applied to requirements A and B together, excluding 3xxx and 5xxx Humanities courses, may be taken on S-N grading.

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

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

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 376-3000 two weeks before mail registration for that quarter begins.

Hum 1001 HUMANITIES IN THE MODERN WORLD I. 4 degree credits, \$3001, \$Rhet 1301, \$148. (◆\$74) (IS)

Eighteenth-century Europe. Old Regime through French Revolution and Napoleon; new science, Enlightenment, cult of sensibility; rococo, neoclassicism, incipient Romanticism. Integrative study of selected works by, e.g., Pope, Voltaire, Rousseau, Diderot, Goethe; Watteau, Boucher, Hogarth, David, Goya; Mozart, Haydn. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, FordH 120, Powell

Hum 1002 HUMANITIES IN THE MODERN WORLD II. 4 degree credits, \$3002, \$Rhet 1302, \$148. (◆\$74) (IS)

Romanticism, liberalism, socialism; Industrial Revolution, "Economic Man," cult of the individual and some counter-statements; realism, naturalism. Integrative study of selected works by, e.g., Wordsworth, Byron, Adam Smith, Bentham, Marx, Mill, Stendhal, Flaubert, Ibsen, Dostoevsky; Delacroix, Courbet, Daumier; Beethoven, Berlioz, Liszt. (No prereq)

Winter Qtr Sec 1 **Th**—6:20-8:50, FordH 120, Archer

Hum 1003 HUMANITIES IN THE MODERN WORLD III. 4 degree credits, \$3003, \$Rhet 1303, \$148. (◆\$74) (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, e.g., Kierkegaard, Darwin, Nietzsche, Chekhov, Joyce, Mann; Manet, Monet, Renoir, Degas; Wagner, Debussy, Mahler. (No prereq)

Fall Qtr Sec 1 **M**—6:20-8:50, FordH 120, Tapp

Hum 1004 HUMANITIES IN THE MODERN WORLD IV. 4 degree credits, \$3004, \$Rhet 1303, \$148. (◆\$74) (IS)

Europe ca. 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)

Winter Qtr Sec 1 **T**—6:20-8:50, FordH 155, Kliger

Hum 1005 HUMANITIES IN THE MODERN WORLD V. 4 degree credits, \$148. (◆\$74)

The Western world since 1945. 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, Genet, Ionesco, Buber, Bultmann, Hesse, Watts, Pollock, Warhol, Stockhausen, Cage, Le Corbusier. (No prereq)

Spring Qtr Sec 1 **T**—6:20-8:50, FordH 130, Kliger

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Hum 1301 (formerly 1101) THE LIFE OF THE MIND. 4 degree credits, \$148. (◆\$74)

Nature of the humanities explored through interpretation of major works from literature, rhetoric, history, philosophy, the visual arts, music, and film. Humanities knowledge and its place in a liberal education. (No prereq)

Fall Qtr Sec 1 **M**—9:30 a.m.-12, MacP, Hershbell

Offered through Continuing Education for Women

Sec 2 **T**—6:20-8:50, FordH 120, Cromwell

Spring Qtr Sec 3 **W**—6:20-8:50, FordH 120, Hershbell

Hum 3321 THEORIES OF CULTURE. 4 degree credits, \$154. (◆\$77)

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, Foucault. (No prereq)

Winter Qtr Sec 1 **M**—6:20-8:50, FordH 120

Hum 3701 COMEDY: TEXT AND THEORY. 4 degree credits, \$154 (◆\$77)

Interdisciplinary study of comedy and comic theory through time and across world cultures in philosophy, psychology, literature, drama, film, folk tale, play, and social convention. (No prereq)

Spring Qtr Sec 1 **T**—6:20-8:50, MurH 105, Powell

Hum 5930 HUMANITIES PROSEMINAR. 3 degree credits, \$115.50.

Review of humanities materials: arts, sciences, and civilization. Authenticity, Wholeness, and Individuation. (Prereq sr, #)

Fall Qtr Sec 1 **T**—6:30-8:30, FordH 160, Kliger

Human Relations

(See EPsy 5135, Workshop in Human Relations)

Industrial Education

(See Vocational and Technical Education)

Industrial Engineering/Operations Research (IEOR)

Institute of Technology

Textbooks for most IEOR courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

J. Edward Anderson, Professor of Mechanical Engineering

Sant R. Arora, Professor of Mechanical Engineering

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Lynn Arneson, Staff Manufacturing, 3M Co.
Edward Barnett, Lecturer in Mechanical Engineering
James Kaster, Staff Manufacturing, 3M Co.
John S. White, Professor of Mechanical Engineering
Robert J. Yourzak, Robert Yourzak and Associates

IEOR 0101C INDUSTRIAL ENGINEERING MANAGEMENT (formerly 0100C). 4 certificate credits, \$148.

A study of the problems and techniques of developing a highly efficient management team for a modern manufacturing concern. Includes discussions on business organization and financing, research and product development, standardization, plant layout and materials handling, production and inventory control, quality control, cost control, labor relations. (No prereq)

Fall Qtr Sec 1 **M**—6:10-9:10, MinMet 104, Arneson

IEOR 5000 INTRODUCTION TO INDUSTRIAL ENGINEERING ANALYSIS. 4 degree credits, \$186.

Scientific management, mathematical models, methods engineering, work measurement, worker satisfaction and participation, wage payment plans, break-even analysis, incremental costs, the time value of money and the present value concept; cost quality and inventory control; production scheduling, plant locations, and layout; linear programming, PERT, and the systems approach to management problems. (Prereq Math 1231; ME 3900 recommended. May not be taken for graduate credit)

Fall Qtr Sec 1 **W**—6:10-9:10, MechE 302, Barnett

IEOR 5020 ENGINEERING COST ACCOUNTING, ANALYSIS AND CONTROL. 4 degree credits, \$186.

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 5000 and ME 3900 recommended. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **W**—6:10-9:10, MechE 302, Barnett

IEOR 5030 QUALITY CONTROL AND RELIABILITY. 4 degree credits, \$186.

History of quality control, quality policies and objectives, economics of quality, design for system effectiveness, reliability and maintainability, statistical aids to reliability, quality specifications, inspection, acceptance sampling, vendor relations, process control, motivation for quality, quality assurance, and quality control engineering. (Prereq Math 1231, ME 3900. IEOR 5000 recommended. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6:10-9:10, MechE 302, Arora

★IEOR 5703 PROJECT MANAGEMENT. 4 degree credits, \$186.

A broad practical understanding of project management—including project planning, scheduling, budgeting, staffing, task and cost control, and communicating with/motivating/managing team members. (Prereq at least senior standing. Qualified students may register for graduate credit at the University of Minnesota. Limited to 35)

Fall Qtr Sec 1 **M**—6:10-9:30, MechE 302, Yourzak

new

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Industrial Relations (IR)

School of Management

Textbooks for most IR courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450)

Your attention is called to the Industrial Relations Certificate program. See the Degrees and Certificates section of this Bulletin.

(See also GC 3602, Applied Supervision; GC 3464, Communication in Organizations; GC 3560, Personnel Administration; Psy 5701, Personnel and Industrial Psychology; Spch 5441, Communication in Human Organizations)

Business degree students must take Industrial Relations courses A-N.

Dennis Ahlburg, Assistant Professor of Industrial Relations
Ross E. Azevedo, Associate Professor of Industrial Relations
Martin W. Duffy, Associate Professor of Industrial Relations
Robert L. Fjerstad, Human Relations Consultants
Kenneth L. Gagala, Instructor in Industrial Relations
Edward R. Goettl, Manager of Industrial Relations, The Gillette Co.
Stephen D. Gordon, Attorney, Robins, Zelle, Larson and Kaplan
Lynn Harris, Personnel Director, U. S. Corps of Engineers
Leslie Kraus, Leslie J. Kraus Inc.
Howard E. Miller, Assistant Professor of Industrial Relations
Peter Obermeyer, Mediator, Minnesota Bureau of Mediation Services
Duane (Pete) L. Peterson, Human Resources, Moore Data Management Services
Yin Sog Rhee, Instructor in Industrial Relations
Paul L. Schumann, Assistant Professor of Industrial Relations
Cyrus F. Smythe, Lecturer in Industrial Relations
Miles Smayling, Instructor in Industrial Relations
Theodore E. Weinberger, Lecturer in Industrial Relations

★IR 0001C SUPERVISION I: ELEMENTS OF SUPERVISION. 3 certificate credits, \$111 plus \$2 special fee. Total \$113. (IS)

A general discussion of basic principles of supervision in the office and factory. Survey of principles for the handling of day-to-day problems of supervisors, with emphasis upon human relations aspects of such problems. Deals with problems such as selection, induction and training of new employees, employee appraisal, giving orders, handling grievances, discipline, and employee morale. Extensive use of class discussion of practical problems drawn from office and plant situations. (No prereq. Limited to 35)

Fall Qtr Sec 1 **M**—6:20-8:50, FordH 285 (Limit 30)
Sec 2 **W**—7-9:30, Robbinsdale/Armstrong HS C-55, Plymouth
(Limit 30)

Winter Qtr Sec 3 **T**—6:20-8:50, FordH 285

Spring Qtr Sec 4 **Th**—6:20-8:50, FordH 285

IR 0002C SUPERVISION II: ADVANCED TECHNIQUES OF SUPERVISION. 3 certificate credits, \$111 plus \$2 course fee. Total \$113.

Emphasizes specialized supervisory techniques based upon principles outlined in Supervision I. Includes discussion of research in supervisory methods and practices and their relative success in application in the office and plant. Methods of supervisory training, morale measurement, job analysis and job evaluation, safety

(continued next page)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

programs, wage and salary administration, principles of organization and communications are among the topics discussed. Extensive use is made of discussion method and case studies. (Prereq 0001C or #)

Winter Qtr Sec 1 **W**—6:20-8:50, KoltH S137

★IR 3000 ORGANIZED LABOR AND THE POLITICAL PROCESS. 4 degree credits, \$179.

Within an Industrial Relations system framework, this course explores organized labor's involvement in the political process. Political process refers both to internal union politics and to external politics: national, state, and local. Topics include an IR system model; the environment, structure and functions of the AFL-CIO; union democracy and oligarchy; conditions favoring union involvement in external politics; the incentives, finances, techniques and results of union political action; labor-party alliances and their historic roots; labor's legislative lobby; and labor's involvement in political campaigns. (Prereq at least 90 credits completed or in progress. Limited to 35)

Fall Qtr Sec 1 **Th**—6:20-8:50, BlegH 130, Duffy

★IR 3000 LABOR ARBITRATION. 4 degree credits. **Tentatively scheduled for 1985-86.**

★IR 3000 POLICY AND PRACTICE IN LABOR LAW. 4 degree credits, \$179.

This course of study will include an analysis and discussion of employees' rights to organize and restraints on certain union activity. It will deal in depth with the responsibility and role of the National Labor Relations Board; its organization, how representation (union elections) matters are processed, discussion of unfair labor practice charges and injunctions. It will also examine the role of state labor relations agencies and their function in protecting employee rights. The course will also examine the arbitrator's role in these matters and will review the government agencies role in collective bargaining; i.e., FMCS, BMS, WERC. (Prereq at least 90 credits completed or in progress. Meets concurrently with 8000 sec 1. Limited to 30)

Winter Qtr Sec 2 **M**—6:10-8:40, BlegH 130

★IR 3000 COLLECTIVE BARGAINING: THE PUBLIC SECTOR. 4 degree credits, \$179.

Examines the development and diffusion of collective bargaining regarding governmental employment. The primary focus is on state/local units; items to be considered include, for example: patterns of employer/union relationships, key issues in negotiations and public policy, the impact of governmental operations (e.g., civil service systems/fiscal aspects). (Prereq at least 90 credits completed or in progress. Meets concurrently with 8000 sec 2. Limited to 30)

Spring Qtr Sec 3 **W**—6:20-8:50, BlegH 130

IR 3000 JOB ANALYSIS, DESCRIPTION AND PAY. 4 degree credits, \$179.

This class will give the student working in the area or interested in the area of personnel an opportunity to learn and apply the techniques of job analysis, job description writing and job evaluation. The student will also be given an opportunity to learn the principles of compensation theory and various types and methods of compensation. (Prereq at least 90 credits completed or in progress)

Spring Qtr Sec 4 **W**—6:20-8:50, BlegH 205, Fjerstad

IR 3000 SELECTION PROCEDURES, TECHNIQUES AND REGULATIONS. 4 degree credits, \$179.

Course designed for personnel practitioner or one preparing to enter the field. Subject deals with employment regulations and rules, interviewing, testing, and other selection techniques. (Prereq at least 90 credits completed or in progress)

Fall Qtr Sec 5 **W**—6:20-8:50, KoltH S136, Fjerstad

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

IR 3002 INDUSTRIAL RELATIONS SYSTEMS: LABOR MARKETS AND THE MANAGEMENT OF HUMAN RESOURCES. 4 degree credits, \$8002, \$179. (IS)

The study of labor markets, manpower management, Federal-State employment policy, and the resolution of industrial conflict. Process followed in valuing, employing, developing, motivating, and maintaining human resources in an industrial society. (Prereq at least 90 credits completed or in progress; Econ 1001, Econ 1002, Psy 1001. Sec 5 meets concurrently with 8002)

- Fall Qtr** Sec 1 T—6:20-8:50, AndH 270
Sec 2 W—6:20-8:50, AndH 310
★Sec 3 Th—6-8:30, Richfield HS 141 (Limit 30)
Winter Qtr Sec 4 W—6:20-8:50, BlegH 230
Spring Qtr Sec 5 T—6:20-8:50, BlegH 115

IR 3007 COLLECTIVE BARGAINING NEGOTIATIONS AND MODERN LABOR RELATIONS. 4 degree credits, \$179. (IS)

Analysis of collective bargaining negotiations between employers and/or employer associations and unions. Relevant policies of employers, unions, and the public; background of the labor movement; current practices in labor relations; and significant trends. (Prereq at least 90 credits completed or in progress)

- Fall Qtr** Sec 1 M—6:20-8:50, BlegH 120
Winter Qtr Sec 2 Th—6:20-8:50, BlegH 210
Spring Qtr Sec 3 M—6:20-8:50, Mgmt/Econ 160

IR 3010 HUMAN RELATIONS AND APPLIED ORGANIZATION THEORY. 4 degree credits, \$179.

The problems of human relations arising in modern organizations and approaches to their solution. Philosophies and theories of human relations and their translation into policy. Discussions, cases, role-playing, and skill building sessions. **Note:** Not intended for use in meeting State Department of Education Human Relations Certification requirement. See EPsy 5135. (Prereq at least 90 credits completed or in progress)

- Fall Qtr** Sec 1 T—6:20-8:50, Law 3
★Sec 2 Th—6-8:30, Ramsey HS, Roseville (Limit 30)
Winter Qtr Sec 3 M—6:20-8:50, BlegH 125
Spring Qtr★Sec 4 T—6:30-9, Robbinsdale/Armstrong HS
C-260, Plymouth (Limit 30)
Sec 5 Th—6:20-8:50, Law 1

★**IR 8000 LABOR ARBITRATION.** 4 degree credits. **Tentatively scheduled for 1985-86.**

★**IR 8000 POLICY AND PRACTICE IN LABOR LAW.** 4 degree credits, \$340.

See description for 3000 sec 3. (No prereq. Open only to students admitted to the University of Minnesota Graduate School. Meets concurrently with 3000 sec 2. Limited to 30)

- Winter Qtr** Sec 1 M—6:10-8:40, BlegH 130

★**IR 8000 COLLECTIVE BARGAINING: THE PUBLIC SECTOR.** 4 degree credits, \$340.

See description for 3000 sec 3. (No prereq. Open only to students admitted to the University of Minnesota Graduate School. Meets concurrently with 3000 sec 3. Limited to 30)

- Spring Qtr** Sec 2 W—6:20-8:50, BlegH 130

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

IR 8002 INDUSTRIAL RELATIONS SYSTEMS: LABOR MARKETS AND THE MANAGEMENT OF HUMAN RESOURCES. 4 degree credits, \$3002, \$340.

See course description for IR 3002. (Prereq Econ 1001, Econ 1002, Psy 1001. Open only to students admitted to the University of Minnesota Graduate School. Meets concurrently with 3002, sec 4)

Winter Qtr Sec 1 W—6:20-8:50, BlegH 230

Informal Courses

See the *Noncredit Courses* section of this Bulletin page 470.

Institute of Technology (loft)

Textbooks for most loft courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

Your attention is called to the Professional Development Recognition Program in Engineering and Science, page 187.

Allen J. Baldwin, *Principal Development Engineer, Honeywell, Inc.*

Morris E. Nicholson, *Professor of Materials Science, and Director of Continuing Education for Engineers and Scientists*

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Institute of Technology. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

★loft 0001 **FUNDAMENTALS OF ENGINEERING REVIEW. (E.I.T. REFRESHER).** No credit, \$111.

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. **Must be taken S-N.** (Prereq bachelor's degree in engineering. **Students must bring reference books and hand calculators to class.** Limited to 50)

Fall Spec Term Sec 1 Sa—8:30 a.m.-1, Sept. 22, 29, Oct. 6, 13, 20
(5 meetings), EBCEC 155, StP Campus, Baldwin

Winter Qtr Sec 2 W—6:10-8:40, Arch 10, Baldwin

Insurance (Ins)

School of Management

Textbooks for most Ins courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450)

Andrew F. Whitman, *Professor of Insurance*

C. Arthur Williams, *Professor of Insurance*

Business degree students must take Insurance courses A-N.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Ins 3100 RISK MANAGEMENT AND INSURANCE. 4 degree credits, \$8100, \$179. (IS)

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, and social insurance. **May be taken S-N**—only by non-business degree students. (Prereq at least 90 credits completed or in progress. Section 3 meets concurrently with 8100)

Fall Qtr Sec 1 **W**—5-7:30, AndH 270, Whitman

Winter Qtr Sec 2 **W**—5-7:30, BlegH 150, Whitman

Spring Qtr Sec 3 **W**—5-7:30, AndH 250, Whitman

Ins 3210 ECONOMIC AND SOCIAL SECURITY. 4 degree credits, \$Ins 8210, \$Econ 5534, \$179.

Nature and causes of economic insecurity and poverty. Details and economic and social implications of private and public programs, with emphasis on public programs such as Old Age, Survivors, Disability and Health Insurance (Social Security), workers' compensation insurance, unemployment insurance, and public assistance programs. (Prereq at least 90 credits completed or in progress. Meets concurrently with 8210, Econ 5534)

new

Fall Sem Sec 1 **T**—6:10-7:50, BlegH 220, Williams

Ins 8100 RISK MANAGEMENT AND INSURANCE. 4 degree credits, \$3100, \$340.

See description for 3100. **May be taken S-N** only by students who do not have insurance/finance as a major interest area. (No prereq. Open only to students admitted to the University of Minnesota Graduate School. Section 3 meets concurrently with 3100)

Fall Qtr ★○ Sec 1 **M**—5-7:30, BlegH 210, Whitman
(A joint Day/Extension class limited to
20 Extension students)

Wtr Qtr ★○ Sec 2 **M**—5-7:30, AndH 150, Whitman
(A joint Day/Extension class limited to
20 Extension students)

Spring Qtr Sec 3 **W**—5-7:30, AndH 250, Whitman

Ins 8210 ECONOMIC AND SOCIAL SECURITY. 4 degree credits, \$Ins 3210, \$Econ 5534, \$340.

new

See description for 3210. (No prereq. Open only to students admitted to the University of Minnesota Graduate School. Meets concurrently with 3210, Econ 5534)

Fall Sem Sec 1 **T**—6:10-7:50, BlegH 220, Williams

Certified Financial Planner (CFP)

Bruce W. Erickson, Professor of Management

Andrew F. Whitman, Professor of Insurance, Attorney, Financial Management Consultant

Courses in the Certified Financial Planning program provide training for persons who are or will be offering financial counseling; investment and risk management advice; counseling relating to retirement, tax, or estate planning, or general personal financial planning and implementation. All courses carry certificate credit as distinguished from degree credit and

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

are recorded on a transcript available at the University's Admissions and Records Office (be sure to request an *Extension* transcript). All courses are designed to prepare students to successfully complete six separate rigorous examinations that are administered on a nationwide basis each year.

The American Council on Education has reviewed the CFP program and recommends that the program be approved for 15 semester credit hours (three credit hours per part), as applicable, at the upper division baccalaureate level. The CFP Program also will be included in *The National Guide to Credit Recommendations for Noncollegiate Courses*, a guide to assist colleges and universities in determining credit for learning attained outside the traditional academic environment.

The CFP program is a six-course, professional designation program developed and administered by the College for Financial Planning in Denver, Colo. The college confers the designation of Certified Financial Planner (CFP) on those persons who demonstrate their proficiency in six comprehensive three-hour examinations and who satisfy other requirements of the college.

For a *CFP Bulletin* listing courses, college application, and requirements of the program, write to CFP, University of Minnesota, 206 Wesbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455.

Examinations are scheduled on the second Saturday of the test month. The schedule and deadlines for 1984-85 are as follows: Oct. 1 deadline for December exam; Feb. 1 deadline for April exam; June 1 deadline for August exam.

Persons enrolling in the CFP classes listed below **must** be concurrently enrolled with the College for Financial Planning and **must** pay the enrollment fees for both institutions. This enrollment should be completed well *before* the start of class. Candidates should allow 3 to 4 weeks for processing of applications and delivery of study materials.

CFP 0001C (I) INTRODUCTION TO FINANCIAL PLANNING. 4 certificate credits, \$148.

An introductory course with four broad areas of emphasis: (1) various concepts, theories, and approaches relevant to professional financial planning; (2) the importance of the client/planner counseling relationship and how to gather and analyze client financial data and delineate client goals and objectives; (3) basic concepts of case analysis and a hypothetical client's case; and (4) a general overview of the whole spectrum of personal financial planning—that is, risk management, investments, taxation, retirement, and estate planning. (No prereq)

Fall Qtr Sec 1 **W**—7:30-10, BlegH 130, Whitman

CFP 0002C (II) RISK MANAGEMENT. 4 certificate credits, \$148.

Transferring risks by the use of insurance. The need for an organized and comprehensive plan of risk management is discussed first. Because risk is often transferred to an insurance carrier, the discussion flows into a consideration of the benefits of insurance. The insurance industry is examined, as well as the rules and regulations governing it. The laws and requirements for insurance contracts are considered next. An insurance policy—a legal and binding contract—should be understood by all parties concerned; therefore, guidelines for analyzing an insurance contract are presented. The various fields of insurance—why each is necessary, how the contracts are written, what perils are insured against. Concludes with a consideration of factors which may guide the client's and/or financial planner's choice of an insurer and an agent. Because insurance provides a measure of certainty in an uncertain world, the study of insurance is an important building block in the framework for acquiring or extending the capabilities of highly effective personal financial planners. (Prereq CFP 0001C)

Winter Qtr Sec 1 **M**—7:30-10, AndH 270, Whitman

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

CFP 0003C (III) INVESTMENTS. 4 certificate credits, \$148.

There is a wide variety of assets the client may include in his or her personal investment portfolio, and this unit of study discusses many of them: understanding the nature of long-term assets—how they are bought and sold, how they are valued, and how they may be used in portfolio construction. The breadth and depth of various investment theories and concepts of portfolio management, a survey of the major securities markets, major securities laws and regulations, and the relation of this whole field to personal financial planning are covered. An integration of taxation concepts and theory relates tax planning strategies to the consequences of investment decisions and stresses the importance of tax management in investment planning. An appropriately complex case analysis is introduced and developed throughout the course. (Prereq CFP 0001C, 0002C)

Spring Qtr Sec 1 **W**—7:30-10, AndH 270, Erickson, Whitman

CFP 0004C (IV) TAX PLANNING AND MANAGEMENT. 4 certificate credits. **Tentatively scheduled for summer 1985.**

CFP 0005C (Old V) RETIREMENT AND ESTATE PLANNING. 4 certificate credits, \$148.

A study of both retirement and estate planning, including an in-depth look at pensions, profit-sharing, and other deferred compensation plans, trusts, bequests, and tax laws. Builds upon and integrates the technical knowledge acquired in preceding courses. In this final and comprehensive course, the candidate develops proficiency in the development of overall financial planning programs, using the case analysis and presentation method. (Prereq registered with Denver College before June 2, 1983; CFP 0004C)

Fall Qtr Sec 1 **T**—7:30-10, AndH 210

CFP 0005C (New V) EMPLOYEE BENEFITS AND RETIREMENT PLANNING. 4 certificate credits, \$148.

A study of retirement planning and employer benefits. Development, objectives, and features of private pension plans. Plan types: Individual, Group Contract, Trust Funds, IRAs, Profit Sharing, Thrift, Savings and ESOPs, Tax-deferred Annuities, Deferred Compensation and Tax Laws. (Prereq CFP 0001)

Winter Qtr Sec 1 **W**—7:30-10, AndH 370

CFP 0006C (VI) ESTATE PLANNING. 4 certificate credits. **Tentatively scheduled for summer 1985.**

Employee Benefits Specialist (EBS)

Walter F. Jacobson, CEBS, Lecturer in Insurance

Larry E. Jeddleloh, Lecturer in Insurance

William B. Spalding, Lecturer in Insurance

Robert G. Schwarz, CEBS, Lecturer in Insurance

C. Arthur Williams, Professor of Insurance

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.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

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 has offered nine of the ten CEBS courses—I, II, III, V, VI, VII, VIII, IX, and X.

This year CEE will offer four parts. Some CEBS courses are so close to existing School of Management courses that students should be able to take these existing courses and, with the aid of Learning Guides available from the Foundation and some additional reading, prepare themselves for the CEBS examinations. For example, CEBS Course IV—Management Principles, is close to *Mgmt 3001*, Fundamentals of Management.

During 1985-86 CEE intends to offer four parts: Courses I—Life, Health, and Other Group Benefit Programs, II—Pension Plans, III—Social Security, Savings Plans, and other Retirement Arrangements, and VIII—Industrial Relations.

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, Wisconsin 53005; or call (414) 786-6700.

CEBS Registration

If interested in registration for the CEBS examinations, an initial nonrefundable fee is required. This registration allows candidates to apply for the CEBS examinations (fees are extra), establishes their personal file at the International Foundation of Employee Benefits Plans, and includes the CEBS newsletter. The deadline for application to take the CEBS January 1985 Examinations is November 1, 1984. Further information regarding these examinations and fees may be obtained from CEBS Registrations. See address and telephone number above.

EBS 0001C (I) LIFE, HEALTH, AND OTHER GROUP BENEFIT PROGRAMS. 4 certificate credits, \$148.

new Course I analyzes how protection against the financial losses resulting from poor health, unemployment, and premature death is provided through private sector institutional arrangements using the group insurance mechanism: life insurance benefits, medical expense benefits, disability benefits, dental and vision care, prepaid legal services, and property and liability insurance benefits. (No prereq)
Spring Qtr Sec 1 **T**—6:30-9, AndH 370, Schwarz

EBS 0002C (II) PENSION PLANS. 4 certificate credits, \$148.

Beginning with a brief history of the evolution of corporate and multiemployer pension plans, Course II focuses on the basic features of pension plans and includes plan design, funding instruments, actuarial cost factors and methods, retirement benefit alternatives, tax considerations, and government regulation. (No prereq)
Fall Qtr Sec 1 **Th**—6:30-9, AndH 250, Spalding

EBS 0007C (VII) ASSET MANAGEMENT. 4 certificate credits, \$148.

new Course VII provides an understanding of the investment process for persons who are not professional investment managers. Topics covered include investment objectives, security markets, asset selection, investment timing, portfolio theory, and evaluation of investment performance. The course is based on sound modern theory but emphasizes practical applications of important concepts. Course VI—*Accounting and Information Systems*—is not a prerequisite for this course, but some background in accounting might be helpful. (No prereq)
Fall Qtr Sec 1 **T**—6:30-9, FordH 155, Jeddeloh

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

EBS 0009C (IX) EMPLOYEE BENEFIT PLANS AND THE ECONOMY. 4 certificate credits, \$148.

new

Course IX is devoted to the economic principles underlying inflation, national income, business cycles, employment levels, money and banking, and monetary and fiscal policy. Analysis is made of the impact of such economic principles on employee benefits. (No prereq)

Spring Qtr Sec 1 **Th**—6:30-9, AndH 250, Jacobson

Chartered Life Underwriter (CLU)/ Chartered Financial Consultant (ChFC)

Alfred R. W. Larkin, CLU, Consultant, Guardian Financial Services

Carter G. Bishop, JD, Attorney, Doherty, Rumble & Butler

Robert Chandler, JD, Attorney, Private Practice

Gerald Dederick, JD, Attorney, Wiese & Cox

Steven A. Doyle, CPA, Accountant, Private Practice

Dennis Dyrhaug, Pension Consultant, Pension Planners of North America

Sheldon T. Fleck, JD, Attorney, Private Practice

Douglas Grev, JD, Counsel, North American Life and Casualty

Jon Theobald, JD, CLU, Trust Officer, First National Bank of St. Paul

Scott Wallace, CPA, Accountant, Private Practice

Registration

Registration for all CLU classes must be completed with the CLU executive offices. **No registrations will be taken by the University of Minnesota.** Applications for enrollment may be obtained by calling (612) 544-8087. Or write the Minneapolis-St. Paul chapters of the College of Life Underwriters, 1111 Douglas Dr. N., Minneapolis, MN 55422.

The American College is a privately endowed, nonprofit institution serving the collegiate-level educational needs of life, health, and financial consulting personnel throughout the United States, and awarding, through nationally uniform written examination and experience requirements, the earned diplomas and professional designations CLU and ChFC.

The American College offers a 13-course curriculum. Seven of the courses are common between the CLU and ChFC designation programs. In addition to the seven common courses, each program has three additional courses dealing with the respective areas of specialization of that designation program.

ChFC Courses

HS 0320 FINANCIAL SERVICES: ENVIRONMENT AND PROFESSIONS. 2 certificate credits, \$74 plus \$7 special fee. Total \$81.

An introductory course setting the stage for the CLU and Chartered Financial Consultant programs by providing an overview of the environment in which financial services professionals assist clients in meeting their financial counseling and planning needs. The financial planning process is presented as the framework for identifying client objectives and formulating and assessing plans to achieve them. Special emphasis is placed on effective information gathering and client-counseling techniques. (See registration box above)

Fall Sem Sec 1 St. Paul location

Spring Sem Sec 2 Minneapolis location

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

HS 0321 INCOME TAXATION. 2 certificate credits, \$74 plus \$7 special fee. Total \$81.

The way income tax laws apply to transactions of individuals and businesses is important to financial services professionals in planning that can result in avoidance, minimization, or deferral of taxation. Topics will include the federal income tax system with particular reference to the taxation of life insurance and annuities, the income taxation of individuals, sole proprietorships, partnerships, corporations, trusts, and estates. (See registration box above)

Spring Sem Sec 1 St. Paul location

HS 0322 ECONOMICS. 2 certificate credits, \$74 plus \$7 special fee. Total \$81.

Designed to explain basic economic principles and institutions, an understanding of which is necessary for an appreciation of alternative explanations of and alternative solutions for the more common economic problems found in private and government sectors. Topics include basic macroeconomic and microeconomic concepts such as the price system and the market economy, the circular flow of national income and product, stabilization policy, the determinants of national income, multiplier theory and fiscal policy, the supply of and demand for money, unemployment, and inflation. (See registration box above)

Fall Sem Sec 1 Minneapolis location

HS 0323 FINANCIAL STATEMENT ANALYSIS INDIVIDUAL INSURANCE BENEFITS. 2 certificate credits, \$74 plus \$7 special fee. Total \$81.

The first course in the CLU and ChFC programs providing coverage of products, tools, and techniques. The initial assignments cover various topics related to personal and business financial statements, including the basic concepts of accounting, the format and contents of key financial statements, the techniques of financial statement analysis, and personal budgeting. The second section of the course describes various types of individual insurance coverages available for meeting life, health, and personal property and liability risks. These include individual life insurance policies, individual annuities, disability income policies, medical expense insurance, homeowners policies, and automobile insurance. (See registration box above)

Fall Sem Sec 1 Minneapolis location

HS 0324 INSURANCE ENVIRONMENT AND OPERATIONS. 2 certificate credits, \$74 plus \$7 special fee. Total \$81.

It is important that financial services professionals understand the regulatory constraints which influence insurance company operations and policy configurations, and they should be able to explain the conceptual structure of policies which assure that premiums will be adequate and fair. Topics include legal aspects of contract formation, policy provisions, assignments, ownership rights, creditor rights, beneficiary designations, disposition of life insurance proceeds, and life insurance agency. Also covered are insurance company types, organization, operations, and regulation. (See registration box above)

Fall Sem Sec 1 Minneapolis location

HS 0325 GROUP BENEFITS AND SOCIAL INSURANCE. 2 certificate credits, \$74 plus \$7 special fee. Total \$81.

Due to the growth of group insurance and social insurance, it is important that financial services professionals understand the benefit provisions and the advantages and limitations of both group insurance and social insurance as methods for meeting
(continued next page)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

economic-security needs. Topics include analysis of group insurance benefits, including the regulatory environment, contract provisions, marketing, underwriting, rate-making, plan design, alternative funding methods, and various governmental programs related to the economic problems of death, old age, unemployment, and disability. (See registration box above)

Fall Sem Sec 1 Minneapolis location

HS 0326 PENSIONS AND OTHER RETIREMENT BENEFITS. 2 certificate credits, \$74 plus \$7 special fee. Total \$81.

Emphasizes planning for retirement income and for maximum tax benefits for employees and business owners. Topics include qualified and nonqualified deferred compensation; design of qualified pension, profit-sharing, and other qualified plans; cost factors and funding instruments for qualified plans, income and estate tax aspects, plans for the self-employed, individual retirement plans, tax-deferred annuities, and nonqualified deferred-compensation plans. (See registration box above)

Fall Sem Sec 1 Minneapolis location

HS 0328 INVESTMENTS. 2 certificate credits, \$74 plus \$7 special fee. Total \$81.

The significance of this course is highlighted by the growing importance of money management to individuals. Effective financial planning requires that investments be selected that meet personal objectives and are consistent with personal risk preferences. Topics include various aspects of investment principles and their application to personal finance, yields, limited-income securities, investment markets, valuation of common stock, real estate, debt and credit, mutual funds, variable annuities, tax-sheltered investments, and principles of personal portfolio management. (See registration box above)

For information on availability of this course, call Donna Stroman (CLU at MSI) at 631-7368.

Spring Sem Sec 1 St. Paul location

HS 0329 WEALTH ACCUMULATION PLANNING. 2 certificate credits, \$74 plus \$7 special fee. Total \$81.

The principles of real estate investment and taxation including risk and return, the acquisition, ownership, and disposition of property, principles of loan amortization and depreciation, capital gains and losses, installment sales, exchanges, cash flow analysis and applications, creative financing, and forms of real estate ownership. Fundamentals of tax sheltered and tax incentive investments with emphasis on the major tax, investment and organizational characteristics of real estate, oil and gas, agricultural, and equipment-leasing limited partnerships. Planning for the living estate—a framework for accumulation and retirement planning including methods for preserving wealth, tax planning, time value and budgeting concepts, and special tools and strategies such as IRAs, Keoghs, tax-saving portfolio management techniques, gifts, trusts, and interest-free loans. (See registration box above)

Spring Sem Sec 1 Minneapolis location

HS 0330 ESTATE AND GIFT TAX PLANNING. 2 certificate credits, \$74 plus \$7 special fee. Total \$81.

Estate and gift tax planning including the nature, valuation, transfer, administration, and taxation of property. Particular emphasis will be given to a basic understanding of the unified estate and gift tax system. The course covers gratuitous transfers of property outright or in trust, wills, powers of appointment, federal estate and gift
(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

taxation, the marital deduction, uses of life insurance in estate planning, and other estate planning devices. Also covered is the estate planning process including the client interview, fact finding, and development of appropriate personal estate plans using various estate planning devices. (See registration box above)

Fall Sem Sec 1 St. Paul location

Spring Sem Sec 2 Minneapolis location

HS 0331 PLANNING FOR BUSINESS OWNERS AND PROFESSIONALS. 2 certificate credits, \$74 plus \$7 special fee. Total \$81.

Tax and legal aspects of organizing a business: problems in continuing a business after an owner's death and the insured buy-sell agreement; retirement of a business owner, including estate planning and "estate freezing" techniques; stock dividends, corporate recapitalizations, stock redemptions, and other techniques; lifetime disposition of a business interest—taxable and tax-free dispositions and the use of the installment sale and other methods; business uses of life and health insurance for the benefit of business owners; disability buy-sell agreements, key employee life and health insurance plans, and split-dollar life insurance plans; and business uses of property and liability insurance. The course also covers special problems of professional corporations. (See registration box above)

Fall Sem Sec 1 St. Paul location

Spring Sem Sec 2 Minneapolis location

HS 0332 FINANCIAL AND ESTATE PLANNING APPLICATIONS. 2 certificate credits, \$74 plus \$7 special fee. Total \$81.

A case course aimed at both integrating the various techniques, tools, and products covered in the earlier courses in the Chartered Financial Consultant program with the financial planning process outlined in HS 0320, and giving students practical application in analyzing and solving realistic financial problems of individuals and businesses. Cases range from simple fact patterns and basic documents to complex situations involving not only personal financial problems but also financial problems associated with businesses and business ownership. Clients used in the cases would vary by age, income, family status (married with and without children, single, divorced), occupation (executive, professional, owner of a closely held business), and their objectives and related financial problems. (See registration box above)

Fall Sem Sec 1 Minneapolis location

Interdepartmental Study (ID)

College of Liberal Arts

Textbooks for most ID courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Interdepartmental Study. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

ID 3407 THE DEVELOPING GLOBAL CRISIS. 4 or 5 degree credits, \$154 or \$192.50.
(◆\$77)

Synthetic examination of the most serious problems confronting civilization today focusing on general resource shortages, environmental problems, rising violence within and among nations, prospects for war, and interrelationships between these phenomena, and others especially economic factors. (No prereq)

Fall Qtr Sec 1 **T**—6:20-8:50, LindH 229, Andregg, Johnson,
Smith, Wright, Cooperman, Houck

Islamic

(See Middle Eastern and South Asian Studies)

Italian (Ital)

College of Liberal Arts

Textbooks for most Ital courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

Ronald Martinez, Assistant Professor of Italian
Arshi Pipa, Professor of French and Italian

Joint Day/Extension Classes

You may register through Extension for certain 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 376-3000 two weeks before mail registration for that quarter begins.

Read about language laboratories on page 56.

(See also IC 0584, Italian for Travelers; IC 0604, Buried Cities of the Ancient Romans; and IC 0929, Rome of the Caesars)

Ital 1101-1102-1103 BEGINNING ITALIAN. 5 degree credits each quarter, \$185 each quarter. (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)

Fall Qtr 1101 Sec 1 **Th**—6:20-9:15, FolH 50

Winter Qtr 1102 Sec 2 **Th**—6:20-9:15, FolH 205

Spring Qtr 1103 Sec 3 **Th**—6:20-9:15, FolH 205

Ital 1104 INTERMEDIATE ITALIAN. 5 degree credits, \$185.

Consolidation of basic structures and development of oral fluency through readings and discussions. (Prereq 1103 or #)

Fall Sem Sec 1 **T**—6:20-9:15, FolH 103

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Ital 1105 INTERMEDIATE ITALIAN. 5 degree credits, \$185.

Literary and cultural readings, leading to introductory knowledge of Italian literature and civilization. (Prereq 1104 or #)

Spring Sem Sec 1 T—6:20-9:15, FolH 108

FriT 3604 CINEMAS OF THE REAL.

(See French and Italian, page 222)

Reading Italian

Ital 0001 is specifically designed for individuals who desire only a reading knowledge of the language. The Italian language requirements for a graduate degree may also be satisfied by successfully passing an examination given at the end of the course. Graduate students should check with their advisers for specific language requirements in their field of study.

Ital 0001 READING ITALIAN. No credit.

This course is designed solely to impart a basic reading knowledge of the Italian language. At the end of one quarter the student may take the graduate Reading Examination in Italian. The department will certify to the Graduate School a reading knowledge of Italian upon successful completion of the examination. **Must be taken S-N.** (No prereq)

Not offered 1984-85.

J

Japanese

(See East Asian Studies)

Jewish Studies

(See Ancient Near Eastern and Jewish Studies)

Journalism and Mass Communication (Jour)

College of Liberal Arts

Textbooks for most Jour courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

(See also Informal Courses and Marketing)

Roy E. Carter, Jr., Professor of Journalism

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Michael Griffin, Lecturer in Journalism
 Arnold H. Ismach, Associate Professor of Journalism
 Robert L. Jones, Professor of Journalism
 Lester Metz, Lecturer in Journalism

Candidates for a journalism degree (either professional major or mass communication major or minor) must consult with the Student Services Office in the School of Journalism and Mass Communication, 18C Murphy Hall, 9 a.m. to noon, 1 to 3 p.m. (telephone 373-4445). Specific information about application procedures and requirements should be obtained from the Student Services Office as early as possible.

See also IC 0441, **Newsletter Writing**; IC 0436, **Magazine Writing**; IC 0439, **Creative Writing**; and IC 0596, **Introduction to Word Processing**.

Jour 1001 INTRODUCTION TO MASS COMMUNICATION. 2 degree credits, \$74.
 (♦\$37) (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. (No prereq)

Fall Qtr Sec 1 **T**—6:20-8:30, MurH 311

Spring Qtr Sec 2 **M**—6:20-8:30, MurH 308

Jour 1002 VISUAL COMMUNICATION. 2 degree credits, \$74. (♦\$37)

Study and 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. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, MurH 105, Griffin

Winter Qtr Sec 2 **W**—6:20-8:50, MurH 105, Griffin

Jour 3008 MASS COMMUNICATION PROCESSES, STRUCTURE. 4 degree credits, \$154.
 (♦\$77)

Analysis of a variety of communication theories as they relate to mass communication processes; major structural aspects of mass communication systems as they influence mass communication processes. (Prereq Jour 1001 for non-jour majors; C in prep jour courses with 2.5 GPA across the four and app filed for major status for intended prof jour majors ... C in prep Jour courses with 2.5 GPA across the four and filed study plan for intended mass comm majors ... C in Jour 1001 and study plan filed for intended mass comm minors; if you do not have these requirements met in the School of Journalism, you may not apply this toward major requirements)

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

★Jour 3173 MAGAZINE WRITING. 4 degree credits, \$154. (IS)

Writing feature articles for general, class, and trade publications; study of market free-lance methods. (No prereq for non-jour majors; 3101 for professional journalism students; if you do not have professional major status in the School of Journalism, you may not apply this toward major requirements. Limited to 16)

Fall Qtr Sec 1 **W**—6:20-8:50, MurH 212

Winter Qtr Sec 2 **Th**—6:20-8:50, MurH 212

Read about abbreviations, symbols, and maps on page 60.
 Courses and sections in red have limits on enrollment. See page 20.

Jour 3201 PRINCIPLES OF ADVERTISING. 4 degree credits, \$154. (◆\$77)

Theory, principles and functions of advertising, its role in social, economic and marketing structure. Newspapers, magazines, radio, and television as advertising media. (No prereq for non-jour majors; major status for professional journalism, mass communication students; completion of Jour 1001 and study plan filed for intended mass communication minors)

Winter Qtr Sec 1 M—6:20-8:50, MurH 105

(See also Professional Improvement Courses and Seminars)

★Jour 3321 (formerly 3231) BASIC MEDIA GRAPHICS. 4 degree credits, \$154 plus \$10 course fee. Total \$164.

Basic introduction to mass media graphics, including design principles and history, production technology, typographic legibility, research and analysis of printing and production costs. (No prereq for non-jour majors; major status for professional journalism students; if you do not have professional major status in the School of Journalism, you may not apply this toward major requirements. Limited to 16)

Spring Qtr Sec 1 M—6:20-8:50, MurH 315

★Jour 5155 ADVANCED REPORTING METHODS. 4 degree credits, \$154.

Investigative techniques for the mass media, including quantitative research methods, use of records and documents, analysis of statistics, advanced interviewing, and methods for adverse conditions. (Prereq professional experience with # for non-jour majors; major status, 3101 for professional journalism majors or grad status; if you do not have professional major status in the School of Journalism, you may not apply this toward major requirements. Qualified students may register for graduate credit at the University of Minnesota. Limited to 16)

Spring Qtr Sec 1 Th—6:20-8:50, MurH 30, Ismach

★Jour 5221 PUBLICATION GRAPHICS. 4 degree credits, \$154 plus \$10 course fee. Total \$164.

Role of printing processes in graphic communication. Technique and production of illustrations. Significant developments in graphic arts technology. (Prereq major status for professional journalism students; study plan and preparatory journalism courses completed for mass communication majors, minors; or 8 cr in 3000- or 5000-level courses in art and design, or #; if you do not have these requirements met in the School of Journalism, you may not apply this toward major requirements. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)

Winter Qtr Sec 1 W—6:20-8:50, MurH 311, Metz

Jour 5251 PSYCHOLOGY OF ADVERTISING. 4 degree credits, \$Psy 5751, \$154. (◆\$77) (IS)

Psychological principles, research techniques, and applications in advertising and selling. Consumer attitudes and behavior. Psychological mechanisms upon which effectiveness of advertisements and commercials depends. (Prereq Psy 1001. Major status required for professional journalism students; study plan and preparatory journalism courses completed for mass communications majors, minors; if you do not have these requirements met in the School of Journalism, you may not apply this toward major requirements. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Psy 5751)

Fall Qtr Sec 1 Th—6:20-8:50, MurH 308, Jones

Spring Qtr Sec 2 Th—6:20-8:50, MurH 311, Jones

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Jour 5501 COMMUNICATION AND PUBLIC OPINION I. 4 degree credits, \$154. (♦\$77) (IS)

Theories of communication process and of persuasion and attitude change. Functions of interpersonal and mediated communication in diffusion of information and in opinion formation. (Prereq 16 cr in social science departments or # for non-jour majors; major status for professional journalism students; study plan and preparatory journalism courses completed for mass communications majors, minors; if you do not have these requirements met in the School of Journalism, you may not apply this toward major requirements. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6:20-8:50, MurH 311, Carter

Jour 5549 PUBLIC RELATIONS. 4 degree credits, \$154. (♦\$77)

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. (Prereq 16 cr in social science departments or # for non-jour majors; major status for professional journalism students; study plan and preparatory journalism courses completed for mass communications majors, minors; if you do not have these requirements met in the School of Journalism, you may not apply this toward major requirements. May not be taken for graduate credit)

Winter Qtr Sec 1 **M**—6:20-8:50, MurH 311

★Jour 5559 CASE STUDIES IN PUBLIC RELATIONS. 4 degree credits, \$154.

Case study approach to the application of public relations principles in the solution of problems in business, government, education, and community. Designed to enable students to sharpen their perceptions, insights, and judgments in examining practical and ethical questions. (Prereq # for non-jour majors; Jour 5549 and major status for professional journalism students; if you do not have these requirements met in the School of Journalism, you may not apply this toward major requirements. May not be taken for graduate credit. Limited to 25)

Spring Qtr Sec 1 **T**—6:20-8:50, MurH 308

Jour 5601 HISTORY OF JOURNALISM. 4 degree credits, \$154. (♦\$77) (IS)

Development of American newspapers and periodicals, from beginnings in Europe to present day; rise of radio and television; relation of communications developments to political, economic, and social trends. (No prereq for non-jour majors; major status for professional journalism students; study plan and preparatory courses completed for mass communications majors, minors; if you do not have these requirements met in the School of Journalism, you may not apply this toward major requirements. May not be taken for graduate credit)

Spring Qtr Sec 1 **W**—6:20-8:50, MurH 308

Jour 5615 HISTORY OF VISUAL COMMUNICATION IN THE MASS MEDIA. 4 degree credits, \$154. (♦\$77)

Social history of photography, film, and video. Informational, documentary and entertainment functions of visual communication. Organizational structures, visual styles, and audiences. (No prereq for non-jour majors; major status for professional journalism students; study plan and preparatory courses completed for mass comm majors, minors; if you do not have these requirements met in the School of Journalism, you may not apply this toward major requirements. May not be taken for graduate credit)

Fall Qtr Sec 1 **T**—6:20-8:50, MurH 105, Griffin

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Jour 5721 MASS MEDIA IN A DYNAMIC SOCIETY. 4 degree credits, \$154. (♦\$77) (IS)

Economic, political, and social determinants of character and content of mass communications in America. Impact, structure, functioning of mass media. Problems, prospects, and criticism. Professionalism, technology, and reform. (Prereq 16 cr in social science departments or # for non-jour majors; major status for professional journalism students; study plan and preparatory journalism courses completed for mass communications majors, minors; if you do not have these requirements met in the School of Journalism, you may not apply this toward major requirements. May not be taken for graduate credit)

Spring Qtr Sec 1 M—6:20-8:50, MurH 311

L

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. Inquiries may also be directed to: Martin W. Duffy (373-5306) or John J. Flagler (373-3662).

Laboratory Medicine and Pathology (LMed)

Medical School

Textbooks for most LMed courses are available in the Health Sciences Bookstore (376-4007)

(See also Public Health)

Laël Gatewood, Associate Professor of Laboratory Medicine and Pathology

OLMed 5346 COMPUTER APPLICATIONS FOR HEALTH PROVIDERS. 3 degree credits, SHSU 5018, \$186. (1 additional credit for computer project, \$62. Total \$248)

A survey of current applications of computers and associated provider roles in health care areas both in the hospital and in the community. Procedures for data entry, work scheduling, report production, record summaries, instructional modules, status monitoring, and decision support are reviewed. Lectures are individualized to meet the projected professional needs of the students. Other learning activities include directed readings, topical literature review and critique, observation and evaluation of selected health-related computer systems, and assigned computer interactions. (Prereq health professional or student in health care discipline. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class. Meets concurrently with HSU 5018)

Winter Qtr Sec 1 T—4:15-7, MoosT 2-620, Gatewood

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Landscape Architecture (LA)

Institute of Technology

Textbooks for most LA courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

(See also Architecture, Informal Courses, and Horticultural Science)

C. Gustav Hard, Professor of Horticultural Science

Marjorie Elaine Pitz, Lecturer in Landscape Architecture

Margaret Sand, Lecturer in Landscape Architecture

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 376-3000 two weeks before mail registration for that quarter begins.

LA 1024 THEORY OF LANDSCAPE DESIGN. 4 degree credits, \$148. (◆\$74)

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—6:10-8:40, AlderH 415, StP Campus, Hard
Books available at the St. Paul Campus Bookstore (373-0800)

LA 1031 INTRODUCTION TO LANDSCAPE ARCHITECTURE. 4 degree credits, \$148. (◆\$74)

Design potential of the landscape; exercises in assessment of land developments and detail landscapes; the role of the landscape architect in shaping the natural and cultural environment. Field trips to various sites and professional offices. (No prereq)

Spring Qtr Sec 1 TTh—6:10-9, AlderH 310, StP Campus, Sand
Books available at the St. Paul Campus Bookstore (373-0800)

★LA 3094 LANDSCAPE ARCHITECTURE GRAPHICS. 4 degree credits, \$186. (◆\$93)

An architectural drawing course with emphasis on graphic communication skills, including: lettering and layout, freehand drawing, plan drawing, sections and elevations, perspective drawing and analysis graphics. Class size allows instruction to adjust to various student need and ability levels. Recommended for entry level LA students and for professionals desiring additional graphic skills. (No prereq. Limited to 20)

Winter Qtr Sec 1 TTh—6:30-9:30, AlderH 310, StP Campus, Pitz
Books available at the St. Paul Campus Bookstore (373-0800)

Languages

(See Languages and Studies in the Index in the back of this Bulletin for a complete listing)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Language Laboratories

(See page 56)

Latin (Lat)

College of Liberal Arts

Textbooks for most Lat courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

(See also Classics Greek and Modern Greek)

Robert P. Sonkowsky, Professor of Classical Studies

Read about language laboratories on page 56.

NOTE—Lat 1101-1102-1103 require no previous knowledge of Latin. The following non-language classes may be applied toward the CLA second language requirement, Route II (see page 562): Clas 1042, 3145, 5008, 5145; Phil 3001.

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Latin. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

Lat 1101-1102-1103 LATIN. 5 degree credits each quarter, \$185 each quarter. (IS)

Fifteen college credits of Latin for all ages: junior high, senior high and college students, pre- and post-college adults, families—the learning community. Programmed texts and tapes for home study permit self-pacing. Knowledge is broken up into isolated bits, which students master bit by bit, returning to previous bits as necessary. 90% success rate. Weekly discussions motivate learning, provide community, and explore humanistic educational dimensions of Classical Latin traditions. Courses meet concurrently each term and with 1104. Students are divided into study groups, which meet one hour each week; the hour is arranged between 6:10 and 9:10 p.m. Wednesdays. The entire class will meet from 6:10 to 7:10 p.m. the first class each term. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103)

Fall Qtr	1101 Sec 1	W —FolH 304, 306, 307, Sonkowsky
	1102 Sec 2	W —FolH 304, 306, 307, Sonkowsky
	1103 Sec 3	W —FolH 304, 306, 307, Sonkowsky
Winter Qtr	1101 Sec 4	W —FolH 304, 306, 307, Sonkowsky
	1102 Sec 5	W —FolH 304, 306, 307, Sonkowsky
	1103 Sec 6	W —FolH 304, 306, 307, Sonkowsky
Spring Qtr	1101 Sec 7	W —FolH 304, 306, 307, Sonkowsky
	1102 Sec 8	W —FolH 304, 306, 307, Sonkowsky
	1103 Sec 9	W —FolH 304, 306, 307, Sonkowsky

(See also IC 0604, Buried Cities of the Ancient Romans; and IC 0929, Rome of the Caesars)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Lat 1104 LATIN READINGS: CAESAR. 5 degree credits, \$185. (IS)

Reading in Book I of Julius Caesar's masterpiece *The Gallic Wars*. Weekly one-hour study groups on Wednesdays arranged between 6:10 and 9:10 p.m. The entire class will meet from 6:10 to 7:10 p.m. the first class each term. Meets concurrently with 1101-1102-1103. (Prereq 1103 or #).

Fall Qtr Sec 1 W—FolH 304, 306, 307, Sonkowsky

Winter Qtr Sec 2 W—FolH 304, 306, 307, Sonkowsky

Spring Qtr Sec 3 W—FolH 304, 306, 307, Sonkowsky

Latin American Studies

College of Liberal Arts

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Latin American Studies. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 373-2691 two weeks before mail registration for that quarter begins.

Law, Business

(See Business Law)

Legal Studies Education

(See General College)

Linguistics (Ling)

College of Liberal Arts

Textbooks for most Ling courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

(See also English as a Second Language; and Engl 3851, The English Language)

Bruce T. Downing, Associate Professor of Linguistics

Larry G. Hutchinson, Associate Professor of Linguistics

Michael B. Kac, Associate Professor of Linguistics

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Linguistics. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

See also Television Course, Ling 1001, *The Nature of Human Language*, page 551.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Ling 1005 LANGUAGE AND SOCIETY. 4 degree credits, \$148. (◆\$74) (IS)

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)

Spring Qtr Sec 1 **W**—6:20-8:50, FolH 50, Kac

Ling 3001 INTRODUCTION TO LINGUISTICS. 5 degree credits, \$3005, 5001, \$192.50. (◆\$96.25)

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. Meets concurrently with 5001)

Winter Qtr Sec 1 **T**—6:20-9:35, FolH 110, Hutchinson

Ling 3811 LANGUAGE LOYALTY AND BILINGUALISM IN MINNESOTA. 4 degree credits, \$154.

Linguistic ecology; maintenance and loss of immigrant and native languages in America; linguistic borrowing; foreign accents; types of bilingual behavior; research strategies; student research on bilingual communities in the Twin Cities and surrounding areas. (No prereq...1001 or 3001 recommended...knowledge of a second language helpful. A joint Day/Extension class)

Spring Qtr Sec 1 **TTh**—4:30-5:45, FolH 204, Downing

Ling 5001 INTRODUCTION TO LINGUISTICS. 5 degree credits, \$3001, 3005, \$192.50.

See course description for Ling 3001. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3001)

Winter Qtr Sec 1 **T**—6:20-9:35, FolH 110, Hutchinson

Ling 5401 INTRODUCTION TO COMPUTATIONAL LINGUISTICS. 4 degree credits, \$154. (◆\$77)

Methods and issues in computer processing of natural language; speech recognition and synthesis; LISP and augmented transition networks; syntactic- and semantic-based parsing; meaning representations; application. (Prereq 3001 or 5001 or CSci 3103 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **T**—6:20-8:50, FolH 302, Hutchinson

Ling 5731, 5732, 5733 A CONTRASTIVE APPROACH TO MODERN ENGLISH. 4 degree credits each quarter. \$154 each quarter.

Linguistic structures of standard English and contrastive analysis of these structures with those of another language, with implications for the learning of English as a second language. **Does not fulfill degree requirements for majors in Linguistics or ESL.** (Prereq 3001 or 5001 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr 5731 Sec 1 **W**—6:20-8:50, FolH 204, Downing

Winter Qtr 5732 Sec 2 **W**—6:20-8:50, FolH 204, Downing

Spring Qtr 5733 Sec 3 **W**—6:20-8:50, FolH 204, Downing

Ling 5821 SOCIOLINGUISTICS. 4 degree credits, \$154.

Social determinants of linguistic diversity, variability, and change; linguistic behavior and social control; methods of community-based linguistic research. (Prereq 3001 or 5001 or #. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **MW**—4:15-5:30, FolH 204, Kac

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

M

MacPhail Center Courses

See the *Noncredit Courses* section of this Bulletin.

Management (Mgmt)

School of Management

Textbooks for Mgmt courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450)

Marcia Agee, Instructor in Management
Janet Dukerich, Instructor in Management
John Guarino, Instructor in Management
Thomas Faranda, Lecturer in Management
Robert Goodman, Instructor in Management
Jon Kerstetter, Instructor in Management
John A. Miller, Instructor in Management
Dong Soo Park, Instructor in Management
Michael Rappa, Instructor in Management
William Roering, Instructor in Management
Gary Seiler, Instructor in Management
Raymond E. Willis, Professor of Management

(See also IC 0414, Advanced Arts Management; and Professional Improvement Courses and Seminars)

Except for Management 5101 (which may be taken S-N), business degree students must take Management courses A-N.

★Mgmt 3001 FUNDAMENTALS OF MANAGEMENT. 4 degree credits, \$8001, \$179 plus \$8 course fee. Total \$187.

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. (Prereq at least 90 credits completed or in progress. **May not be taken S-N.** Limited to 40)

Fall Qtr	Sec 1	M—5:30-8:15, BlegH 435
	Sec 2	M—5:30-8:15, BlegH 335
	Sec 3	T—5:30-8:15, AndH 370
	Sec 4	W—5:30-8:15, BlegH 220
	Sec 5	W—5:30-8:15, BlegH 205
	Sec 6	Th—5:30-8:15, Richfield HS 143 (Limit 30)
Winter Qtr	Sec 7	M—5:30-8:15, BlegH 225
	Sec 8	M—5:30-8:15, BlegH 230
	Sec 9	T—5:30-8:15, Irondale HS IMC, New Brighton (Limit 40)

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Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Sec 10 **W**—5:30-8:15, BlegH 435

Sec 11 **W**—5:30-8:15, BlegH 425

Sec 12 **Th**—5:30-8:15, BlegH 335

Spring Qtr Sec 13 **M**—5:30-8:15, BlegH 230

Sec 14 **M**—5:30-8:15, BlegH 435

Sec 15 **T**—5:30-8:15, Ramsey HS 250, Roseville (Limit 35)

Sec 16 **W**—5:30-8:15, BlegH 225

Sec 17 **W**—5:30-8:15, BlegH 245

★**Mgmt 3002 PSYCHOLOGY IN MANAGEMENT.** 4 degree credits, \$179 plus \$8 course fee. Total \$187.

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. (Prereq at least 90 credits completed or in progress. **May not be taken S-N.** Limited to 36)

Fall Qtr Sec 1 **T**—5:30-8:15, BlegH 245

Sec 2 **W**—5:30-8:15, BlegH 235

Winter Qtr Sec 3 **W**—5:30-8:15, BlegH 255

Spring Qtr Sec 4 **M**—5:30-8:15, BlegH 155

Sec 5 **W**—5:30-8:15, BlegH 235

★**Mgmt 3004 BUSINESS POLICY: STRATEGY FORMULATION AND IMPLEMENTATION.** 5 degree credits, \$223.75 plus \$8 course fee. Total \$231.75.

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 occasionally 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. (Prereq senior and completion of business core or final core course. **May not be taken S-N.** Limited to 35)

Fall Qtr Sec 1 **W**—5:30-8:15, BlegH 330

Winter Qtr Sec 2 **W**—5:30-8:15, BlegH 415

Spring Qtr Sec 3 **W**—5:30-8:15, BlegH 435

★**Mgmt 5101 ADVANCED TOPICS IN MANAGEMENT: CRITICAL ISSUES.** 4 degree credits, \$179 plus \$8 course fee. Total \$187.

A seminar format course designed to allow participants to develop an understanding of the critical issues existing in the area of management. A different topic will be discussed each week. Topics will include management compensation; power and politics in management; employee discipline; ethics; time management; stress and burnout in management; the separation process. Topics are chosen for their importance in the management role at the time of the course offering. Participants will be expected to prepare and participate in discussions. **May be taken S-N.** (Prereq senior or graduate student and #. May not be taken for graduate credit. Limited to 21)

Fall Qtr Sec 1 **M**—5:30-8:15, Law 3, Faranda

Winter Qtr Sec 2 **M**—5:30-8:15, Law 3, Faranda

Spring Qtr Sec 3 **M**—5:30-8:15, Law 3, Faranda

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**OMgmt 5175 BUSINESS FORECASTING.** 4 degree credits, \$179 plus \$8 course fee. Total \$187.

Methods of economic, social, and technological forecasting and applications to problems of managerial decision making and planning. (Prereq at least junior standing for business degree students; QA 1050 or 8191, Mgmt 3001 or 8001, or #. **May not be taken S-N.** 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 M—5:30-8:15, BlegH 245, Willis

Management Information Systems (MIS)

School of Management

Textbooks for most MIS courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450)

(See also Computer Science, Operations Management, and Professional Improvement Courses and Seminars)

Gordon B. Davis, Professor of Management Science
Gerardine De Sanctis, Assistant Professor of Management Science
Gary W. Dickson, Professor of Management Science
Gordon C. Everest, Associate Professor of Management Science
Steven Feldman, Senior Analyst, Coordinated Management Systems
Jeremiah E. Fruin, Associate Professor, Agricultural and Applied Economics
Kenneth Hasledalen, Manager of Financial Systems, TIES, Inc.
Thomas R. Hoffmann, Professor of Management Science
Hugh Juergens, Manager, Data Management, FMC
John B. Knauff, Knauff & Associates, Inc.
Ernest L. Larson, Senior Staff Consultant, Control Data Corp.
James A. Larson, Senior Principal Research Scientist, Honeywell
John Lehman, Assistant Professor of Management Sciences
Salvatore T. March, Assistant Professor of Management Science
J. David Naumann, Assistant Professor of Management Science
Thomas P. Teresi, CDP, Tom Teresi, Inc.
Ronald D. Visness, Director of Research, Minnesota Energy Agency
James C. Wetherbe, Professor of Management Science
Charles Wolter, Engineering and Management Consultant

Your attention is called to the Information Systems Analysis and Design certificate. See the Degrees and Certificates section of this Bulletin.

Except for MIS 3098, 3099, and 5098 (which may be taken S-N), business degree students must take Management Information Systems courses A-N.

COMPUTER PROGRAMMING COURSES (MIS 3098, 3099, 5098)

Students in the MIS programming modules learn to program by writing programs. No regular lectures are scheduled; the appropriate text, plus course materials which are handed out at the first class meeting, provide the student complete course material. After the first class meeting, students may not register without **written** permission from the instructor. Students **must attend their section at 5:30 p.m. during the first week of class** to learn course

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

procedures, due dates, and course assignments. After that, the student needs to attend only 1) to take a quiz, or 2) for assistance with a programming problem. Satisfactory completion of a programming module requires satisfactory completion of four programs and four quizzes. After the first class meeting students may come to the programming laboratory, 54 Blegen Hall, at any time M, T, W, or Th, 5:30-9:30 p.m.

MIS 3098 ELEMENTARY COBOL. 2 degree credits, \$89.50 plus \$8.50 course fee and \$6 special fee. Total \$104.

An introduction to programming in the COBOL language. COBOL is the most widely used business data processing language. In the modular structure, the student will complete a structured set of COBOL programs and several short quizzes on or before scheduled dates. Consultants provide student assistance and administer quizzes. (Prereq 3040 or ¶3040 or 3100 or ¶3100 or 3300 or ¶3300 and at least 90 credits completed or in progress). See schedule below.

MIS 3099 ELEMENTARY FORTRAN. 2 degree credits, \$89.50 plus \$8.50 course fee and \$6 special fee. Total \$104.

An introduction to programming in the FORTRAN language. FORTRAN is used primarily for programming analytical problems. In the business environment it is used where much computation is required; for example, forecasting, optimization, and statistical analyses. In the modular structure, the student will complete a structured set of FORTRAN programs and several short quizzes on or before scheduled due dates. Consultants provide student assistance and administer quizzes. (Prereq 3040 or ¶3040 or 3100 or ¶3100 or 3300 or ¶3300 and at least 90 credits completed or in progress). See schedule below.

Schedule for elementary programming courses

MIS 3098 and 3099 are scheduled to meet concurrently. Students must register for a particular section, but after the first meeting of their section, may attend any of the sections.

Fall Qtr	Sec 1	M —5:30-9:30, BlegH 5, Naumann
	Sec 2	T —5:30-9:30, BlegH 5
	Sec 3	W —5:30-9:30, BlegH 5
	Sec 4	Th —5:30-9:30, BlegH 5
Winter Qtr	Sec 5	M —5:30-9:30, BlegH 5, Naumann
	Sec 6	T —5:30-9:30, BlegH 5
	Sec 7	W —5:30-9:30, BlegH 5
	Sec 8	Th —5:30-9:30, BlegH 5
Spring Qtr	Sec 9	M —5:30-9:30, BlegH 5, Naumann
	Sec 10	T —5:30-9:30, BlegH 5
	Sec 11	W —5:30-9:30, BlegH 5
	Sec 12	Th —5:30-9:30, BlegH 5

MIS 5098 INTERMEDIATE COBOL. 2 degree credits, \$89.50 plus \$8.50 course fee and \$6 special fee. Total \$104.

Intermediate features of the COBOL programming language. In the modular structure, the student will complete a structured set of COBOL programs and several
(continued next page)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

short quizzes on or before scheduled dates. Consultants provide students assistance and administer quizzes. (Prereq MIS 3098 and 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—5:30-9:30, BlegH 10, Naumann
 Sec 2 W—5:30-9:30, AndH 350
- Winter Qtr** Sec 3 T—5:30-9:30, AndH 230, Naumann
 Sec 4 W—5:30-9:30, BlegH 10
- Spring Qtr** Sec 5 T—5:30-9:30, AndH 270, Naumann
 Sec 6 W—5:30-9:30, BlegH 10

Note: Students with programming experience or other data processing experience may complete an equivalency examination for MIS 3098, 3099 or 3100. Students who believe they are qualified should contact Extension Counseling (373-3905).

MIS 0140C MATHEMATICAL FOUNDATIONS OF SYSTEMS ANALYSIS. 3 certificate credits, \$111 plus \$8.50 course fee. Total \$119.50.

The basic mathematical tools necessary for the development of quantitative skills. Boolean algebra, set theory, logic, sequences and series, iteration, linear algebra, and matrix manipulation. For those students with limited college algebra or those who must refresh their skills. For those in the certificate program, MIS 0140C provides mathematical skills needed for QA 1050, Elementary Managerial Statistics. (No prereq)

- Fall Qtr** Sec 1 M—5:30-8, AndH 350, Fruin
Spring Qtr Sec 2 M—5:30-8, AndH 350, Fruin

★**MIS 3040 ORGANIZATIONAL USE OF COMPUTERS.** 4 degree credits, \$MIS 3100, 5100, \$179 plus \$8.50 course fee. Total \$187.50.

A non-technical description of computers and computer systems in government and business. Introduces the kinds of people who work with computers and describes their activities in organizations. Presents current issues such as privacy, data banks, point-of-sale systems and future issues such as communications networks, mini and micro computer applications, electronic funds transfer. Discusses the history, status, and future of computer industry. (Prereq at least 90 credits completed or in progress; intended for non-MIS students or students with no previous computer knowledge. Limited to 60)

- Fall Qtr** Sec 1 T—5:30-8:50, BlegH 150, Visness
 Sec 2 W—5:30-8:50, BlegH 150
- Winter Qtr** Sec 3 T—5:30-8:50, AndH 350, Visness
Spring Qtr Sec 4 W—5:30-8:50, BlegH 250
 Sec 5 Th—5:30-8:50, BlegH 145, Visness

★**MIS 3100 INTRODUCTION TO COMPUTERS AND COMPUTER DATA PROCESSING (replaces 5100).** 4 degree credits, \$179 plus \$8.50 course fee. Total \$187.50.

Elements of computer hardware and their functions. Computer software. Tools and methods for development of computer applications. Preparing computer programs. Acquisition, organization and management of computer resources. The computer industry. Future developments. (Prereq at least 90 credits completed or in progress. **Open to nondegree students with equivalent experience.** Limited to 50)

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Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Fall Qtr	Sec 1	M —5:30-8:50, BlegH 10, Teresi
	Sec 2	T —5:30-8:50, AndH 270
	Sec 3	W —5:30-8:50, AndH 210
	Sec 4	Th —5:30-8:50, BlegH 135
Winter Qtr	Sec 5	T —5:30-8:50, BlegH 145
	Sec 6	W —5:30-8:50, BlegH 130
	Sec 7	Th —5:30-8:50, BlegH 145
Spring Qtr	Sec 8	M —5:30-8:50, BlegH 10
	Sec 9	T —5:30-8:50, BlegH 10
	Sec 10	W —5:30-8:50, BlegH 255
	Sec 11	Th —5:30-8:50, BlegH 215

★**MIS 3101 INTRODUCTION TO MANAGEMENT INFORMATION SYSTEMS (replaces 5101).** 4 degree credits, \$179 plus \$8.50 course fee. Total \$187.50.

An overview of MIS. Conceptual foundations of MIS including: concepts of information, humans as information processors, system concepts and information systems, management and organizational concepts relevant to MIS, decision making concepts and the value of information for decision making. The structure of an MIS and its development, organization, management and evaluation. Emphasis is placed on the user/system interface. (Prereq at least 90 credits completed or in progress and recommended prior course in MIS or equivalent experience. Limited to 50)

Fall Qtr	Sec 1	M —5:30-8:50, BlegH 250, Juergens
	Sec 2	T —5:30-8:50, BlegH 250
	Sec 3	W —5:30-8:50, BlegH 250
	Sec 4	Th —5:30-8:50, BlegH 250
Winter Qtr	Sec 5	M —5:30-8:50, BlegH 250
	Sec 6	W —5:30-8:50, BlegH 250
	Sec 7	Th —5:30-8:50, BlegH 250
Spring Qtr	Sec 8	M —5:30-8:50, BlegH 250
	Sec 9	T —5:30-8:50, BlegH 250
	Sec 10	W —5:30-8:50, BlegH 125
	Sec 11	Th —5:30-8:50, BlegH 250

★**MIS 5102 INTRODUCTION TO INFORMATION SYSTEMS ANALYSIS.** 4 degree credits, \$179 plus \$8.50 course fee. Total \$187.50.

The phases within the systems life cycle for development of an information system application. Emphasis on the standards, tools and techniques required in the analysis of information requirements and in logical design. Processing alternatives and alternative approaches to systems design. (Prereq 3098, 3100, 3101 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. Credits may not be applied to MBA programs begun after December 15, 1979. Limited to 50)

Fall Qtr	Sec 1	T —5:30-8:50, BlegH 215, Wetherbe
	Sec 2	W —5:30-8:50, BlegH 215
Winter Qtr	Sec 3	T —5:30-8:50, BlegH 250, Wetherbe
Spring Qtr	Sec 4	T —5:30-8:50, BlegH 110, Wetherbe
	Sec 5	W —5:30-8:50, BlegH 105

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

★MIS 5103 **DATA STRUCTURES AND FILE PROCESSING.** 4 degree credits, \$179 plus \$8.50 course fee and \$4 special fee. Total \$191.50.

Principles and techniques of data organization, physical representation of data in a computer system, and file processing strategy to meet user information requirements and system performance objectives. Topics include: theory of files, data storage devices, record design, sequential and random processing, linked structures, indexing, hashing, balanced search trees, multi-attribute search, inverted and multilist file organizations, hierarchic, network, and relational structure, sorting, data compression, and data integrity. Students establish and manipulate data structures on the University computer facility. (Prereq 3100 or 5100, 3101 or 5101, 5098 or ¶ 5098 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. Credits may not be applied to MBA programs begun after December 15, 1979. Limited to 50)

Fall Qtr Sec 1 Th—5:30-8:50, BlegH 120

Winter Qtr Sec 2 M—5:15-9, BlegH 135, Everest

Spring Qtr Sec 3 T—5:30-8:50, BlegH 130

Sec 4 Th—5:30-8:50, BlegH 440

★MIS 3131 **DATABASE MANAGEMENT SYSTEMS.** 4 degree credits, \$179 plus \$8.50 course fee and \$4 special fee. Total \$191.50.

Concepts and methods in the definition, creation, and management of data-bases for management information systems. Topics include: objectives of data-base management, design and evaluation of database management systems, theory of files, data structures, storage structures, interrogation, responsibilities of the database administrator, database integrity, security, and privacy. (Prereq 5103 and at least 90 credits completed or in progress. **Open to nondegree students with equivalent experience.** Limited to 50)

Fall Qtr Sec 1 T—5:30-8:50, BlegH 235

Winter Qtr Sec 2 W—5:30-8:50, BlegH 215

Spring Qtr Sec 3 W—5:30-8:50, BlegH 215

★MIS 3132 **DATA COMMUNICATIONS SYSTEMS.** 4 degree credits, \$179 plus \$8.50 course fee. Total \$187.50.

Characteristics of transmission facilities and networks, concentrators and multiplexors, terminals, modems and front end processors. Control hardware and software systems. The role of data communications in management information systems. (Prereq 5102 and at least 90 credits completed or in progress. **Open to nondegree students with equivalent experience.** Limited to 50)

Winter Qtr Sec 1 Th—5:30-8:50, BlegH 155, E Larson

Spring Qtr Sec 2 Th—5:30-8:50, BlegH 230, E Larson

★MIS 3151 **ADMINISTRATION AND CONTROL OF MANAGEMENT INFORMATION SYSTEMS.** 4 degree credits, \$179 plus \$8.50 course fee. Total \$187.50.

Technical tools and management concepts required in the administration of the information systems function. Topics include the structure and management of computer operations, measurement of operating performance, budgeting and planning, project management techniques for systems and programming, personnel selection, training, and compensation, and the role of the information processing manager. (Prereq 5102 and Mgmt 3001 and at least 90 credits completed or in progress. **Open to nondegree students with equivalent experience.** Limited to 50)

Fall Qtr Sec 1 W—5:30-8:50, BlegH 240, Knauff

Spring Qtr Sec 2 W—5:30-8:50, BlegH 230, Knauff

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Marketing (Mktg)

School of Management

Textbooks for most Mktg courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450)

Robert A. Hansen, Associate Professor of Marketing

Your attention is called to the Credit and Financial Management Certificate program in the Degrees and Certificates section of this Bulletin; Journalism; Informal Courses; Professional Improvement Courses and Seminars; and the General College marketing sequence)

Business degree students must take Marketing courses A-N.

★Mktg 3000 PRINCIPLES OF MARKETING. 4 degree credits, \$179 plus \$10 course fee. Total \$189. (IS)

Study of the basic policy and strategy issues in marketing and the environmental factors that affect these issues. Legal, behavioral, ethical, competitive, economic, and technological factors are examined as they affect product, pricing, promotion, and marketing channel decisions. (Prereq Econ 1002 or # and at least 90 credits completed or in progress. **May not be taken S-N.** Limited to 60)

Fall Qtr	Sec 1	M—5:30-8, BlegH 240
	Sec 2	T—6:10-8:40, AndH 370
	Sec 3	W—5:30-8, BlegH 10
	Sec 4	W—6:10-8:40, Richfield HS 142 (Limit 30)
	Sec 5	Th—6:10-8:40, BlegH 155
Winter Qtr	Sec 6	M—6:10-8:40, AndH 350
	Sec 7	T—5:30-8, BlegH 150
	Sec 8	W—6:10-8:40, MechE 221
	Sec 9	W—6:10-8:40, Robbinsdale/Armstrong HS C-261 (Limit 35)
Spring Qtr	Sec 10	Th—6:10-8:40, BlegH 150
	Sec 11	M—6:10-8:40, BlegH 440
	Sec 12	T—6:10-8:40, BlegH 150
	Sec 13	W—6:10-8:40, BlegH 420
	Sec 14	Th—6:10-8:40, Ramsey HS 253, Roseville (Limit 35)

★Mktg 3010 BUYER BEHAVIOR AND MARKETING ANALYSIS. 4 degree credits, \$3098, 3095, \$179 plus \$10 course fee. Total \$189.

Identifying and applying secondary and primary data to solve marketing problems. Special consideration is given to consumer and organizational buyer behavior. Topics include survey and experimental research techniques, market segmentation, data analysis, behavior concepts and processes, consumer and organizational decision-making models, and managerial applications of these models. (Prereq 3000 and QA 1050 or equivalent, and at least 90 credits completed or in progress. Limited to 45)

Fall Qtr	Sec 1	M—6:10-8:40, AndH 310
Winter Qtr	Sec 2	T—6:10-8:40, BlegH 155
Spring Qtr	Sec 3	T—6:10-8:40, BlegH 235

(See also Jour 5251/Psy 5751, Psychology of Advertising)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★Mktg 3020 **MARKETING OPERATIONS MANAGEMENT.** 4 degree credits, \$179 plus \$10 course fee. Total \$189.

Development of marketing plans, primarily for manufacturing organizations. Analytical methods for developing and appraising marketing programs, factors important in shaping marketing plans. Planning for selling, communication, distribution, pricing, product development and marketing research activities. (Prereq 3010 and at least 90 credits completed or in progress. Limited to 40)

Winter Qtr Sec 1 Th—6:10-8:40, BlegH 330

Spring Qtr Sec 2 T—6:10-8:40, BlegH 420

★Mktg 3030 **SALES AND DISTRIBUTION MANAGEMENT.** 4 degree credits, \$179 plus \$10 course fee. Total \$189.

Design and management of marketing systems for distributing goods and services to industrial users and ultimate consumers. Institutional, functional, and social aspects of distribution channels, with emphasis on the managerial problems of channel design, integration, and control. Managing the personal selling function as an integral part of the overall distribution system, with emphasis on sales force organization, selection, training, motivation, compensation, forecasting, budgeting, and control. (Prereq 3020 and at least 90 credits completed or in progress. Limited to 40)

Winter Qtr Sec 1 Th—6:10-8:40, BlegH 340

★Mktg 3050 **MARKETING COMMUNICATIONS.** 4 degree credits, \$179 plus \$10 course fee. Total \$189.

The communications aspect of the marketing mix and the communications process. Emphasis on advertising, media alternatives, and research. Integration of the sales force in communications strategy. (Prereq 3020 and at least 90 credits completed or in progress. Limited to 40)

Spring Qtr Sec 1 W—6:10-8:40, AndH 370

★Mktg 3065 **RETAIL MANAGEMENT.** 4 degree credits, \$179 plus \$10 course fee. Total \$189.

Study of retailing principles, problems, and trends as they relate to various types of retailing institutions. Assignment of trade journals and supplementary readings for in-store study (buying and pricing) with a local retailer. (Prereq 3010 and at least 90 credits completed or in progress. Limited to 40)

Fall Qtr Sec 1 T—6:10-8:40, BlegH 155

Spring Qtr Sec 2 M—6:10-8:40, BlegH 255

★◉Mktg 3090 **MARKETING TOPICS: INTRODUCTION TO DIRECT RESPONSE MARKETING.** 4 degree credits (may be repeated for credit), \$179 plus \$10 course fee. Total \$189.

Evaluation of when to use direct response marketing from a strategic planning perspective. Description and evaluation of the various direct response marketing techniques. Class exercises include formulating and actual direct response marketing campaign. (Prereq 3010 and at least 90 credits completed or in progress. A joint Day/Extension class limited to 20 Extension students)

Spring Qtr Sec 1 T—4:30-7, RarigC 610, Hansen

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Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Mathematics (Math)

Institute of Technology

Textbooks for most Math courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

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)

Stephen Agard, Associate Professor of Mathematics

Kenneth Becker, Instructor, Inver Hills Community College, Lecturer in Mathematics

John Corbett, Instructor, College of St. Thomas, Lecturer in Mathematics

William A. Dolid, Instructor, Minneapolis Community College, Lecturer in Mathematics

John Eagon, Professor of Mathematics

David Frank, Associate Professor of Mathematics

Bert Fristedt, Professor of Mathematics

Shamlell Gupta, Assistant Professor, College of St. Catherine, Lecturer in Mathematics

Lawrence R. Harper, Assistant Professor of Mathematics

Walter James, Information Systems Manager, State of Minnesota, Lecturer in Mathematics

Howard Jenkins, Associate Professor of Mathematics

Harvey B. Keynes, Professor of Mathematics

Nickolas Konopliv, Lecturer in Mathematics

Norman Meyers, Professor of Mathematics

Chester L. Miracle, Associate Professor of Mathematics

Thomas H. Ressler, Instructor in Mathematics

U. Kurt Scholz, Associate Professor of Mathematics, College of St. Thomas, Lecturer in Mathematics

William Serbyn, Associate Professor of Mathematics, College of St. Thomas, Lecturer in Mathematics

Yasutaka Sibuya, Professor of Mathematics

James G. Swenson, Instructor, Anoka Senior High, Lecturer in Mathematics

J. Will Thomas, Lecturer in Mathematics

James E. Thompson, Associate Professor of Mathematics

V. Varadachari, Instructor, Lakewood Community College, Lecturer in Mathematics

John L. Vitelli, Market Manager, Honeywell, Inc., Lecturer in Mathematics

Richard A. Wetzler, Instructor, Lakewood Community College, Lecturer in Mathematics

Heekyung Youn, Lecturer in Mathematics

A minor is available in mathematics. Interested students should call Extension Counseling, 373-3905, 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. However, if it has been more than two years since the last mathematics course in high school was completed, the student should register in Math 1201, or possibly Math 0009 (intermediate algebra) which corresponds to second-year high school algebra. 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 for Math 0009. A student who knows very little algebra should register for Math 0006 (introductory algebra). Math 0006 is the same as first-year high school algebra.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

The entrance requirement for the Institute of Technology is four years of high school mathematics, including solid geometry and trigonometry or Math 1201.

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 transferred to the prerequisite class.

There is also a regular placement exam to tell 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 Wed., Aug. 1, 1984, in Vincent Hall 211. It is also given at 6:15 p.m. Wed., Nov. 7, 1984, and at 6 p.m. on Wed., Feb. 6, 1985, in Vincent Hall 213. There is no fee or preregistration for this exam. The test lasts approximately 1 hour. Students may not use calculators

Mathematics for nonmajors and prebusiness students

Math 1131 and Math 1142 are designed in cooperation with the 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. 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 5 to 7 years. A student may not take this course if he or she has not had 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 373-3000 two weeks before mail registration for that quarter begins.

Continuing Education for Women offers the **Math Anxiety Program** designed especially for people who encounter blocks in mathematics, or who are afraid of mathematics. For a complete listing of courses and supportive services, refer to page 464.

★Math 0005 ARITHMETIC FOR ADULTS. No credit, \$111.

A practical course for anyone needing an elementary background in mathematics. It includes arithmetic of whole numbers, fractions, and decimal fractions with aids to quick and easy computation; measurement of length, area, and volume; introduction to elementary algebra. This course is intended for those who lack background in arithmetic and introductory algebra or those who suffer from a fear of mathematics. It is a good refresher for the arithmetic of fractions and decimals. Some exercises will be done in class. If you do not wish to take any tests or have a grade, register for audit. You may register for S-N grade, which means you get a grade of either satisfactory (pass) or no credit (no pass). (No prereq. Limited to 40)

Fall Qtr Sec 1 TTh—6:10-7:50, MinMet 116

(See also Math Anxiety Program, page 464)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

★**Math 0006 ELEMENTARY ALGEBRA.** Entrance credit, \$185.

This course begins at the absolute beginning of algebra and includes all the elements of beginning algebra. It is equivalent to one year of ninth grade algebra with plenty of time given to each topic. (Prereq arithmetic. Entrance requirement for most colleges including the College of Liberal Arts and the Institute of Technology. Limited to 30)

Fall Qtr	Sec 1	MW —6:10-8:15, Arch 30 (Limit 50)
	Sec 2	MW —6:10-8:15, Arch 15
	Sec 3	TTh —6:10-8:15, Arch 30 (Limit 50)
	Sec 4	TTh —6:10-8:15, Arch 15
Winter Qtr	Sec 5	MW —6:10-8:15, Arch 15
	Sec 6	MW —6:10-8:15, Arch 30
	Sec 7	TTh —6:10-8:15, Arch 30
Spring Qtr	Sec 8	MW —6:10-8:15, Arch 30
	Sec 9	TTh —6:10-8:15, Arch 30

Math 0007 PLANE GEOMETRY. Entrance credit, \$185.

Elements of plane geometry, equivalent to 1 year of high school plane geometry with adequate time given to each idea. (Prereq one year of high school higher algebra or Math 0006. Entrance requirement for College of Liberal Arts and Institute of Technology)

Fall Qtr	Sec 1	MW —6:10-8:15, Arch 45
Winter Qtr	Sec 2	TTh —6:10-8:15, Arch 45
Spring Qtr	Sec 3	MW —6:10-8:15, Arch 45

★**Math 0009 INTERMEDIATE ALGEBRA.** Entrance credit, \$185.

Covers high school higher algebra. (Prereq 1 year high school algebra and mathematics placement score or 0006. Entrance requirement for Institute of Technology and is a prereq to all IT and Arts College Mathematics courses. Limited to 30)

Fall Qtr	Sec 1	MW —6:10-8:15, Arch 60 (Limit 50)
	Sec 2	MW —6:10-8:15, KoltH S132
	Sec 3	MW —6:10-8:15, KoltH S133
	Sec 4	MW —6:30-8:35, Robbinsdale/Armstrong HS C-258, Plymouth
	Sec 5	MW —6:30-8:35, Ramsey HS 250, Roseville
	Sec 6	TTh —5:15-7:20, KoltH S132
	Sec 7	TTh —6:10-8:15, Phys 236A (Limit 40)
	Sec 8	TTh —6:10-8:15, KoltH S133
	Sec 9	TTh —6:10-8:15, KoltH S134
	Sec 10	TTh —6:30-8:35, Minnetonka HS 123 (Limit 35)
Winter Qtr	Sec 11	MW —6:10-8:15, Arch 45 (Limit 45)
	Sec 12	MW —6:10-8:15, Phys 236A
	Sec 13	MW —5:30-7:35, KoltH S132
	Sec 14	TTh —6:10-8:15, Phys 236A
	Sec 15	TTh —6:10-8:15, KoltH S132
	Sec 16	TTh —6:10-8:15, KoltH S133

(continued next page)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

- Spring Qtr** Sec 17 **MW**—6:10-8:15, KoltH S132
 Sec 18 **MW**—6:10-8:15, KoltH S133
 Sec 19 **MW**—6:10-8:15, KoltH S134
 Sec 20 **TTh**—6:10-8:15, KoltH S132
 Sec 21 **TTh**—6:30-8:35, Richfield HS

★**Math 0009 INTERMEDIATE ALGEBRA.** Entrance credit, \$185.

Covers high school higher algebra. For those students who are deficient in a higher algebra course, this course is a prerequisite for a variety of areas such as economics, chemistry, business, etc., and is an entrance requirement for all IT and Arts College mathematics courses. (Prereq a working understanding of elementary algebra or a recent 1-year high school algebra course in elementary algebra or Math 0006 or CEW Arithmetic and Elementary Algebra. Limited to 30)

cew

- Fall Sem** Sec 22 **Th**—12:45-3:45, MacP, Ressler

Offered through Continuing Education for Women

Math 1005 FOUNDATIONS OF ARITHMETIC. 3 degree credits, \$111.

Includes logical and axiomatic basis of rules for arithmetical operations with integers, rational numbers, and real irrational numbers; real number line and inequalities as necessary background for teaching arithmetic in elementary school, topics from geometry and congruences; with some attention to history of subject and its role in our culture and civilization. Not available for Arts College credit. This is not a course in how to do arithmetic. (Prereq 1 year elementary algebra or 0006 and 1 year high school geometry or #)

- Spring Qtr** Sec 1 **W**—6:30-9, VinH 206

★**Math 1008 TRIGONOMETRY.** 4 degree credits, \$1201, \$148. (IS)

Analytic trigonometry, identities, equations, properties of trig functions; right and oblique triangles. (Prereq plane geometry and 2 years of high school algebra and mathematics placement score or grade of C or better in 0009 and plane geometry. A student who has already had Math 1201 may not receive credit for this course. Limited to 30)

- Fall Qtr** Sec 1 **MW**—6:10-7:50, VinH 301
 Sec 2 **TTh**—6:10-7:50, VinH 301
Winter Qtr Sec 3 **MW**—6:10-7:50, VinH 301
 Sec 4 **TTh**—6:10-7:50, VinH 301
Spring Qtr Sec 5 **MW**—6:10-7:50, VinH 301
 Sec 6 **TTh**—6:10-7:50, VinH 301

★**Math 1111 COLLEGE ALGEBRA AND ANALYTIC GEOMETRY.** 5 degree credits, \$1201, \$185. (IS)

Functions and graphs, quadratic equations, progressions, inequalities, complex numbers, theory of equations; permutations and combinations, probability, systems of equations, determinants, graphing of linear and quadratic equations, conics in standard position, logarithms. For students in social sciences, behavioral sciences, prebusiness administration, and others who require only some analytic geometry and college algebra without trigonometry. (Prereq plane geometry, 2 years high school
(continued next page))

Read about abbreviations, symbols, and maps on page 60.
 Courses and sections in red have limits on enrollment. See page 20.

algebra and mathematics placement score or plane geometry and 0009. Limited to 35)

- Fall Qtr** Sec 1 **MW**—6:10-8:15, VinH 1
 Sec 2 **MW**—6:10-8:15, SmithH 111
 Sec 3 **MW**—6:10-8:15, Phys 236A
 Sec 4 **MW**—6:30-8:35, Ramsey HS, Roseville
 Sec 5 **TTh**—6:10-8:15, VinH 1
 Sec 6 **TTh**—6:10-8:15, Arch 45
 Sec 7 **TTh**—6:30-8:35, Richfield HS 142 (Limit 30)

- Winter Qtr** Sec 8 **MW**—6:10-8:15, Arch 60
 Sec 9 **MW**—6:10-8:15, VinH 1
 Sec 10 **MW**—6:30-8:35, Robbinsdale/Armstrong HS, Plymouth
 Sec 11 **TTh**—6:10-8:15, Arch 60
 Sec 12 **TTh**—6:10-8:15, VinH 1

CEW **Spring Sem** Sec 13 **Th**—12:45-3:45, MacP, Ressler (Limit 30)
Offered through Continuing Education for Women

- Spring Qtr** Sec 14 **MW**—6:10-8:15, VinH 1
 Sec 15 **MW**—6:10-8:15, Arch 60
 Sec 16 **MW**—6:30-8:35, Ramsey HS 253, Roseville
 Sec 17 **TTh**—6:10-8:15, Arch 60
 Sec 18 **TTh**—6:10-8:15, VinH 1

Non-business students interested in the Master of Business Administration degree should take Math 1131.

★**Math 1131 FINITE MATHEMATICS.** 5 degree credits, \$185.

(For students in the social sciences, behavioral sciences, and prebusiness administration.) Elementary computer programming, financial math, probability, linear algebra, linear programming, Markov chains. (Prereq 1111 or Mathematics placement score. Limited to 50)

- Fall Qtr** Sec 1 **MW**—6:10-8:15, VinH 16
 Sec 2 **TTh**—6:10-8:15, VinH 16
Winter Qtr Sec 3 **MW**—6:10-8:15, VinH 16
 Sec 4 **TTh**—6:10-8:15, VinH 16
Spring Qtr Sec 5 **MW**—6:10-8:15, VinH 16
 Sec 6 **TTh**—6:10-8:15, VinH 16

★**Math 1142 SHORT CALCULUS.** 5 degree credits, \$1211, \$185. (IS)

(A second course of a two-quarter sequence for students in prebusiness administration curriculum and for other students requiring college algebra and a minimal amount of calculus. Students who plan to take several quarters of calculus should not register for this course) Derivatives, and integrals, differential equations, maxima and minima, partial differentiation, applications. (Prereq 1111 or mathematics placement score. Limited to 35)

- Fall Qtr** Sec 1 **MW**—6:10-8:15, VinH 209
 Sec 2 **TTh**—6:10-8:15, VinH 209
Winter Qtr Sec 3 **MW**—6:30-8:35, Ramsey HS 251, Roseville
 Sec 4 **TTh**—6:10-8:15, VinH 209
Spring Qtr Sec 5 **MW**—6:10-8:15, VinH 209
 Sec 6 **TTh**—6:10-8:15, VinH 209

Read about abbreviations, symbols, and maps on page 60.
 Courses and sections in red have limits on enrollment. See page 20.

★**Math 1201 PRE-CALCULUS.** 5 degree credits, \$1111, \$185. (IS)

Inequalities, analytical geometry, complex numbers, binomial theorem, mathematical induction, functions and graphs, and trigonometric, exponential and logarithmic functions. (Prereq 0009 or high school higher algebra, 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 —6:10-8:15, MurH 311 (Limit 50)
	Sec 2	MW —6:10-8:15, VinH 113
	Sec 3	MW —6:30-8:35, Ramsey HS 252, Roseville
	Sec 4	TTh —6:10-8:15, VinH 206
	Sec 5	TTh —6:10-8:15, VinH 113
	Sec 6	TTh —6:30-8:35, Richfield HS 143
Winter Qtr	Sec 7	MW —6:10-8:15, VinH 113
	Sec 8	MW —6:10-8:15, VinH 206
	Sec 9	TTh —5:30-7:35, VinH 211
Spring Qtr	Sec 10	TTh —6:10-8:15, VinH 206
	Sec 11	MW —6:10-8:15, VinH 113
	Sec 12	MW —6:10-8:15, VinH 203
	Sec 13	TTh —6:10-8:15, VinH 113

★**Math 1211 CALCULUS I.** 5 degree credits, \$1142, 1311, \$185. (IS)

Analytic geometry and calculus of functions of one variable, applications. Infinite series and sequences. (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 —6:10-8:15, VinH 20
	Sec 2	MW —6:10-8:15, MurH 308
	Sec 3	MW —6:30-8:35, Ramsey HS 253, Roseville
	Sec 4	TTh —6:10-8:15, Arch 60
	Sec 5	TTh —6:30-8:35, Richfield HS 144
Winter Qtr	Sec 6	MW —6:10-8:15, Phys 143
	Sec 7	MW —6:10-8:15, VinH 20
	Sec 8	MW —6:30-8:35, Ramsey HS 253, Roseville
	Sec 9	TTh —6:10-8:15, VinH 20
Spring Qtr	Sec 10	TTh —6:30-8:35, Richfield HS 142
	Sec 11	MW —6:10-8:15, VinH 20
	Sec 12	MW —6:30-8:35, Robbinsdale/Armstrong HS C-256, Plymouth
	Sec 13	TTh —6:10-8:15, VinH 20
	Sec 14	TTh —6:10-8:15, VinH 6
	Sec 15	TTh —6:10-8:15, MinMet 116

★**Math 1221 CALCULUS II.** 5 degree credits, \$1321, 1421, \$185. (IS)

A continuation of the course described under 1211. (Prereq grade of C or better in 1211. Limited to 35)

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Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Fall Qtr	Sec 1	MW —6:10-8:15, VinH 2
	Sec 2	MW —6:10-8:15, VinH 364
	Sec 3	TTh —6:10-8:15, VinH 2
	Sec 4	TTh —6:10-8:15, VinH 364
Winter Qtr	Sec 5	MW —6:10-8:15, VinH 2
	Sec 6	MW —6:30-8:35, Ramsey HS 252, Roseville
	Sec 7	TTh —6:10-8:15, VinH 2
Spring Qtr	Sec 8	TTh —6:10-8:15, VinH 364
	Sec 9	MW —6:10-8:15, VinH 2
	Sec 10	MW —6:30-8:35, Ramsey HS 253, Roseville
	Sec 11	TTh —6:10-8:15, VinH 2
	Sec 12	TTh —6:30-8:35, Richfield HS 143

★**Math 1231 CALCULUS III.** 5 degree credits, \$1331, \$185. (IS)

A continuation of the course described under 1211. (Prereq grade of C or better in 1221 or equivalent. Limited to 35)

Fall Qtr	Sec 1	MW —6:10-8:15, VinH 314
	Sec 2	MW —6:10-8:15, VinH 6
	Sec 3	TTh —6:10-8:15, VinH 314
Winter Qtr	Sec 4	MW —6:10-8:15, VinH 314
	Sec 5	MW —6:10-8:15, VinH 6
	Sec 6	TTh —6:10-8:15, VinH 314
Spring Qtr	Sec 7	MW —6:30-8:35, Ramsey HS 250 (Limit 30)
	Sec 8	MW —6:10-8:15 VinH 314
	Sec 9	TTh —6:10-8:15 VinH 314

Math 3066 ELEMENTARY DIFFERENTIAL EQUATIONS. 4 degree credits, \$3221, \$186. (IS)

Elementary techniques of problem solving. First and second order equations, linear equations of higher order. (Prereq 1231 with grade of C or better or equivalent)

Winter Qtr Sec 1 **W**—6:10-8:40, VinH 207

Math 3142 INTRODUCTION TO LINEAR ALGEBRA. 4 degree credits, \$3221, 3511, \$186.

Vectors, systems of linear equations, matrices, determinants, eigenvalues, applications, techniques and some proofs of theorems. (Prereq 2 quarters calculus)

Fall Qtr Sec 1 **Th**—6:10-8:40, VinH 207

Spring Qtr Sec 2 **W**—6:10-8:40, VinH 364

★**Math 3211 MULTIVARIABLE CALCULUS.** 5 degree credits, \$3521, 3611, \$232.50. (IS)

Partial differentiation, chain rule, implicit functions, applications. Multiple integrals in two and three dimensions. (Prereq grade of C or better in 1231 or equivalent. Limited to 40)

Fall Qtr Sec 1 **MW**—6:10-8:15, VinH 311

Sec 2 **TTh**—6:10-8:15, VinH 311

Winter Qtr Sec 3 **MW**—6:10-8:15, VinH 311

Sec 4 **TTh**—6:10-8:15, VinH 311

Spring Qtr Sec 5 **MW**—6:10-8:15, VinH 311

Sec 6 **TTh**—6:10-8:15, VinH 311

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**Math 3221 INTRODUCTION TO LINEAR ALGEBRA AND LINEAR DIFFERENTIAL EQUATIONS.** 5 degree credits, \$3066, 3142, 3511, \$232.50. (IS)

Vectors, systems of linear equations, matrices, determinants, bases, eigenvalues. Linear differential equations and systems with constant coefficients, initial value problem and general solutions, variation of parameters for inhomogeneous equations. (Prereq grade of C or better in 1231 or equivalent. Limited to 40)

Fall Qtr Sec 1 **MW**—6:10-8:15, VinH 211 (Limit 50)

Winter Qtr Sec 2 **MW**—6:10-8:15, VinH 211

Sec 3 **TTh**—6:10-8:15, VinH 113

Spring Qtr Sec 4 **MW**—6:10-8:15, VinH 211

Sec 5 **TTh**—6:10-8:15, VinH 211

★**Math 3231 VECTOR ANALYSIS.** 4 degree credits, \$5601-5602, \$186.

Scalar and vector products, derivatives, geometry of space curves, del operator, line and surface integrals, divergence and Stokes' theorem, transformation of coordinates, dyadics, applications. Mostly a technique course, intended mainly for students whose interests are not theoretical, but who wish to learn the relevant mathematical facts and methods. (Prereq grade of C or better in 3211 or equivalent. Limited to 35)

Fall Sem Sec 1 **M**—6:10-8:15, VinH 207

★**Math 5081 (formerly 3581) FOUNDATIONS OF ARITHMETIC.** 4 degree credits, \$186.

Sets, relations, order. Real number system. Continuous functions. (Prereq 3211 or equivalent. 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 **MW**—4:10-5:25, VinH 364, Fristed

★**Math 5082 (formerly 3582) FOUNDATIONS OF ALGEBRA.** 4 degree credits, \$186.

Groups, rings, fields. Applications of number theory and polynomials. (Prereq 3142 or equivalent. 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 **MW**—4:05-5:20, VinH 207

★**Math 5083 (formerly 3583) FOUNDATIONS OF GEOMETRY.** 4 degree credits, \$186.

Axiomatics. Non-Euclidean Geometry. Theorems of Desargues and Pappus. (Prereq 1231 or equivalent. 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 **MW**—4:05-5:20, VinH 207

Math 5090 CALCULUS REFRESHER. 5 degree credits, \$232.50.

A course designed for students who have already had calculus, but who have been away from it for a while and need a review. It is for engineers wishing to take engineering refresher courses or engineering exams, for high school mathematics teachers; or for anyone who wishes to take some advanced math courses. This course will cover the topics of a standard calculus course: differentiation of elementary functions, differentials, the definite integrals, techniques of integrations, applications of integration, polar coordinates, infinite series, approximation, partial differentiation, and multiple integrals. **May be taken S-N.** (Prereq 1 year calculus. Qualified

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

students may register for graduate credit at the University of Minnesota, except for mathematics majors)

Fall Qtr Sec 1 **MW**—6:10-8:15, AkerH 215

Sec 2 **TTh**—6:10-8:15, VinH 211

Winter Qtr Sec 3 **MW**—6:10-8:15, AkerH 215

Spring Qtr Sec 4 **MW**—6:10-8:15, VinH 6

Math 5242-5243 LINEAR ALGEBRA WITH APPLICATIONS. 4 degree credits each quarter, \$186 each quarter.

new

Systems of linear equations, finite dimensional linear spaces, bases, linear transformations, matrices, determinants, eigenvalues, reduction to canonical forms, quadratic and bilinear forms, applications. (Prereq 3221 or 3142 or 3511 or equivalent. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr 5242 Sec 1 **Th**—6:10-8:40, VinH 207

Spring Qtr 5243 Sec 2 **Th**—6:10-8:40, VinH 207

Math 5601 ADVANCED CALCULUS. 4 degree credits, \$186.

new

Differentiation of functions of several variables; vector algebra; curves in three dimensions; directional derivative and gradient; inverse transformation and implicit function theorems; change of variable in multiple integrals. (Prereq 3211 or equivalent. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **T**—6:10-8:40, VinH 207

Math 5602 ADVANCED CALCULUS. 4 degree credits, \$186.

new

Line and surface integrals; Stokes' theorem; convergence of infinite series; orthogonal functions; uniform convergence; integration and differentiation of series. (Prereq 5601. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **T**—6:10-8:40, VinH 207

Mathematics Education (MthE)

College of Education

(Department of Curriculum and Instruction)

Textbooks for most MthE courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

Peggy A. House, Associate Professor of Mathematics Education

Robert Jackson, Professor of Mathematics Education

Thomas R. Post, Professor of Mathematics Education

James E. Stochl, Professor of Mathematics Education

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.

See page 24 for information regarding reopenings that may occur prior to the start of the term.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**OMthE 5081 TEACHING SECONDARY SCHOOL ARITHMETIC.** 2 degree credits, \$94.50.

Survey of concepts, principles, and processes of the secondary school pre-algebra curriculum; learning difficulties, teaching strategies and alternatives; mathematical foundations of pre-algebra topics. **Must be taken A-N.** (Prereq math ed major or minor, Math 5081 or ¶5081 or #. 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 MW—3:15-4, PeikH 375, Stochl

★**OMthE 5082 TEACHING ALGEBRA.** 2 degree credits, \$94.50.

Survey of concepts, principles, and processes of the secondary school curriculum; learning difficulties, teaching strategies and alternatives, mathematical foundations of algebra topics. **Must be taken A-N.** (Prereq math ed major or minor; Math 5082 or ¶5082 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Winter Qtr Sec 1 MW—3:15-4, PeikH 315

★**OMthE 5083 TEACHING GEOMETRY.** 2 degree credits, \$94.50.

Survey of concepts, principles, and processes of the secondary school geometry curriculum; learning difficulties, teaching strategies and alternatives, mathematical foundations of geometry topics. **Must be taken A-N.** (Prereq math ed major or minor, Math 5083 or ¶5083 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Spring Qtr Sec 1 MW—3:15-4, PeikH 375, Post

★**OMthE 5101 WORKSHOP: ELEMENTARY SCHOOL MATHEMATICS.** 1-12 cr (max 12 cr). This offering 3 degree credits, \$141.75.

Modern trends, methods, and materials used to convey mathematical ideas. **Not open to majors in mathematics education. Must be taken A-N.** (Prereq #. 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 Sa—9:15 a.m.-12, PeikH 375, Jackson

★**OMthE 5102 WORKSHOP: MATHEMATICS EDUCATION.** 1-12 cr (max 12 cr). This offering 1, 2, or 3 degree credits, \$47.25, \$94.50, or \$141.75.

Issues, materials, and instructional techniques focusing on a single topic of particular relevance to secondary school and college mathematics teachers. *Sec 1: Adolescent Gifted (3 cr). Sec 2: Recreational Mathematics (1 cr). Sec 3: To be announced (2 cr).* **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 6 Extension students)

Fall Qtr Sec 1 T—4:15-7, PeikH 375, House

Spring Spec Term Sec 2 Sa—Arr, PeikH 375, Jackson

Spring Spec Term Sec 3 Sa—Arr, PeikH 375, Post

★**OMthE 5301 INSTRUCTIONAL LEADERSHIP IN ELEMENTARY SCHOOL MATHEMATICS.** 3 degree credits, \$141.75.

Current trends in methods, materials, content, and evaluation; program development and research; intended for supervisors and principals. **Must be taken A-N.**

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

(Prereq #; **not open to mathematics education majors.** Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Spring Qtr Sec 1 **W**—4:15-7, PeikH 375, Jackson

★**OMthE 5311 TEACHING AND SUPERVISION OF MATHEMATICS IN THE ELEMENTARY SCHOOL.** 3 degree credits, \$141.75.

Present practices and trends in methods, evaluation, and diagnosis; objectives, psychology, and philosophy related to improvement of instruction. **Must be taken A-N.** (Prereq Elem 3391 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 5312. A joint Day/Extension class limited to 6 Extension students)

Fall Qtr Sec 1 **M**—4:15-7, PeikH 375, Post

★**OMthE 5312 TEACHING AND SUPERVISION OF MATHEMATICS IN THE SECONDARY SCHOOL.** 3 degree credits, \$141.75.

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-N.** (Prereq mathematics tchg exper or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 5311. A joint Day/Extension class limited to 6 Extension students)

Fall Qtr Sec 1 **M**—4:15-7, PeikH 375, Post

★**OMthE 5332 CURRENT TRENDS AND ISSUES IN SECONDARY SCHOOL MATHEMATICS INSTRUCTION.** 3 degree credits, \$141.75.

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-N.** (Prereq 5312 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Spring Qtr Sec 1 **Th**—4:15-7, PeikH 375, House

★**OMthE 5366 COMPUTER-ASSISTED MATHEMATICS INSTRUCTION.** 3 degree credits, \$141.75.

The computer as an instructional resource in the mathematics classroom; programming and problem solving using computer as a means of teaching and learning concepts, principles, and skills of mathematics; design of lessons; evaluation of software. **Must be taken A-N.** (Prereq 5312 or SeEd 3365; SeEd 5366 or CIsy 5006, and one year of calculus or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Winter Qtr Sec 1 **Th**—4:15-7, PeikH 355, House

Mechanical Engineering (ME)

Institute of Technology

Textbooks for most ME courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

Your attention is called to the Undergraduate Development Certificate in Mechanical Engineering—95 credits, and Professional Development Recognition Program in Engineering and Science, page 187.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Students interested in degrees and certificates in Mechanical Engineering should see the Degrees and Certificates section of this Bulletin.

Sant Ram Arora, Professor of Mechanical Engineering
 Arthur G. Erdman, Professor of Mechanical Engineering
 Darrell A. Frohrib, Professor of Mechanical Engineering
 Steven Kensinger, Adjunct Assistant Professor of Mechanical Engineering
 William A. Kleinhenz, Professor of Mechanical Engineering
 Virgil A. Marple, Associate Professor of Mechanical Engineering
 Richard Pluntz, Senior Engineer, MPI, Division of CDC
 J.W. Ramsey, Associate Professor of Mechanical Engineering
 Charles J. Scott, Associate Professor of Mechanical Engineering
 Ephraim M. Sparrow, Professor of Mechanical Engineering
 James C. Wilson, Assistant Professor of Mechanical Engineering

Through registration in Extension Classes, students may earn all but approximately 12-16 credits towards a Bachelor's degree in Mechanical Engineering. The degree may then be completed after a limited amount of day school attendance or through University-Industry Television for Education (UNITE). **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 572-573.)**

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 376-3000 two weeks before mail registration for that quarter begins.

ME 0001C REFRESHER COURSE FOR MECHANICAL ENGINEERS. No credit, \$111.

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 302, Pluntz

ME 0124C (formerly 0024C) DESIGN FUNDAMENTALS I. 4 certificate credits, \$148.

Introduction to design fundamentals, principles of statics and dynamics. Relationship between load and stress for ordinary members, bending, tension, torsion, etc., stress-strain relationships. Properties of typical engineering materials including methods of treating and fabrication; standard testing for mechanical properties. (Prereq Math 0009 or #)

Fall Qtr Sec 1 **T**—6:10-9:10, MechE 321, Kleinhenz

★ME 1025 (formerly EG 1025) ENGINEERING GRAPHICS. 4 degree credits, \$EG 1025, \$148. (IS)

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. (Prereq Math 1211 or #. Limited to 50)

Fall Qtr Sec 1 **M**—6:10-9:30, Arch 10

Spring Qtr Sec 2 **M**—6:10-9:30, Arch 10

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

ME 3201 MECHANICAL ENGINEERING SYSTEMS ANALYSIS. 4 degree credits, \$AEM 3401, \$186.

Determination of response of engineering systems utilizing transfer function representation. Analogies between engineering systems based upon transfer function equivalence. (Prereq AEM 3036 or #)

Spring Qtr Sec 1 **W**—6:10-9:30, Arch 40, Frohrib

ME 3203 ANALYSIS OF MECHANISM SYSTEMS. 4 degree credits, \$186.

Diagnostics of the performance of mechanism systems involving linkage, hydraulic, pneumatic, and electro-mechanical components. Energy balance techniques used to describe energy flow through machine systems. Preparation should include basic dynamics. (Prereq AEM 3036 or #)

Fall Qtr Sec 1 **W**—6:10-9:30, Arch 40, Erdman

ME 3205 ENGINEERING SYSTEMS DESIGN. 4 degree credits, \$186.

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)

Winter Qtr Sec 1 **W**—6:10-9:30, MechE 212, Kleinhenz

ME 3301 THERMODYNAMICS. 4 degree credits, \$186.

Properties, equations of state, processes and cycles for various thermodynamic systems. Development of first and second laws of thermodynamics, correlating heat, work and mass transfer. Equilibrium, irreversibility and mixtures. Necessary preparation, introductory thermodynamics and basic calculus. (Prereq Chem 1014 or equivalent or Phys 1281 and Math 3221 or #)

Fall Qtr Sec 1 **T**—6:10-9:30, MechE 212, Scott

ME 3303 APPLIED THERMODYNAMICS. 4 degree credits, \$3305, \$186.

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)

Winter Qtr Sec 1 **T**—6:10-9:30, MechE 221, Scott

★ME 3701-3702 BASIC MEASUREMENTS LABORATORY I AND II. 2 degree credits each quarter, \$93 each quarter.

Treatment of experimental data, analysis and study of experimental systems via the computer. Static and dynamic characteristics of measurement systems. Fundamental principles of measurement and calibration. Measurement of temperature, pressure, vacuum, humidity, density, viscosity, heating values, speed, power, force, stress-strain, and radioactivity. Courses meet concurrently. (Prereq 3301 for 3701; 3701 for 3702. 1 lect and 2 lab hrs per wk. Each section limited to 30)

Spring Qtr **3701** Sec 1 **Th**—5:30-8:30, MechE 370, Marple

3702 Sec 2 **Th**—6:30-9:30, MechE 370, Marple

OME 3741-3742-3743 INDUSTRIAL ASSIGNMENT. 2 degree credits each quarter, \$93 each quarter.

Industrial work assignment in engineering intern 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.

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

(Prereq registration in Engineering Intern Program with written permission of the director of the intern program for 3741; 3741 for 3742. A joint Day/Extension class)

Fall Qtr	3741	Sec 1	Arr , Marple
	3742	Sec 2	Arr , Marple
	3743	Sec 3	Arr , Marple
Winter Qtr	3741	Sec 4	Arr , Marple
	3742	Sec 5	Arr , Marple
	3743	Sec 6	Arr , Marple
Spring Qtr	3741	Sec 7	Arr , Marple
	3742	Sec 8	Arr , Marple
	3743	Sec 9	Arr , Marple

ME 3900 INTRODUCTION TO ENGINEERING STATISTICS. 4 degree credits, \$186.

Elements of probability, descriptive statistics, binomial and Poisson distributions; normal distribution, estimation, hypothesis testing, regression analysis and analysis of variance. (Prereq Math 1231 or equivalent)

Fall Qtr Sec 1 **W**—6:10-9:10, Arch 10, Arora

★**OME 5225 FINITE ELEMENTS IN MECHANICAL DESIGN.** 4 degree credits, \$186.

Introduction to the fundamentals of finite element analysis, oriented toward mechanical engineering design applications. Includes extensive examples from industry and student projects involving 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. (Prereq third year engineering courses and programming. 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**—3:15-6, MechE 302, Kensingler

Winter Qtr Sec 2 **M**—3:15-6, MechE 221, Kensingler

Spring Qtr Sec 3 **M**—3:15-6, MechE 221, Kensingler

ME 5244 VIBRATION ENGINEERING. 4 degree credits, \$186.

Applications of the theory of vibration to the design and optimization of isolators, detuning mechanism, viscoelastic suspensions and structures. (Prereq 3201 or equivalent. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **W**—6:10-9, MechE 321, Frohrib

ME 5342 HEAT TRANSFER. 4 degree credits, \$186.

Steady and unsteady conduction of heat. Convection heat transfer in boundary layer and duct flows; forced and free convection; condensation and boiling; heat exchangers. Heat transfer by thermal radiation; radiative properties of black bodies and real surfaces. (Prereq 3301 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **M**—6:10-9:30, MechE 302, Sparrow

ME 5344 THERMODYNAMICS OF FLUID FLOW. 4 degree credits, \$186.

Compressible flow of gases in engineering systems such as nozzles, ducts, combustion chambers, ramjets, pipe lines, etc. Isentropic flow in variable area passages. Shock waves. Flow with wall friction, heat transfer, and mass transfer. (Prereq 3301 and CE 3400 or AEM 3200 or equivalent. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **M**—6:10-9:30, MechE 302, Sparrow

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

ME 5402 ECOLOGY, TECHNOLOGY, AND SOCIETY. 4 degree credits, §3402, §SSci 3402, \$186.

Examination of dilemmas produced as a result of conflicts between finite limits and population and industrial growth; underlying causes in terms of current technology, values, economics, institutions and political structures; and possible directions for resolution. Faculty from various disciplines participate. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—6:20-8:50, MechE 302, Anderson

ME 5603 THERMAL ENVIRONMENTAL ENGINEERING. 4 degree credits, \$186.

Thermodynamic properties of moist air; h-W diagram for moist air; solar radiation; heat and water vapor transmission in structures; effects of thermal environments upon people, processes, and materials; thermal loads, thermal environmental control systems. (Prereq 3303 and 5342 or equivalent. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—6:10-9:10, MechE 202, Ramsey

ME 5712 SOLAR ENERGY UTILIZATION. 4 degree credits, \$186.

History and potential of solar energy utilization; 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 5342 or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 M—6:10-9:10, MechE 221, Ramsey

OME 5741-5742 INDUSTRIAL ASSIGNMENT AND DESIGN PROJECT. 4 degree credits each quarter, \$186.

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

5742 Sec 2 Arr, Marple

Winter Qtr 5741 Sec 3 Arr, Marple

5742 Sec 4 Arr, Marple

Spring Qtr 5741 Sec 5 Arr, Marple

5742 Sec 6 Arr, Marple

Medicine

For information on noncredit conferences or workshops in medicine, please contact Office of Continuing Medical Education, 3-110 Owre Hall (Box 293 Hospital); telephone 373-8012. (See also History of Medicine)

Metallurgy/Materials Science (MatS)

Institute of Technology

Textbooks for most MatS courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

Your attention is called to the Professional Development Recognition Program in Engineering and Science, page 187. **No courses offered 1984-85.**

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Microbiology (MicB)

Medical School

Textbooks for most MicB courses are available at the Health Sciences Bookstore (376-4007)

Russell Bey, Associate Professor of Microbiology

MicB 3103 GENERAL MICROBIOLOGY. 5 degree credits, \$5105, \$Biol 3013, \$VPB 3103, \$310 plus \$20 course fee. Total \$330.

Morphology, physiology, taxonomy, and ecology of bacteria and other microorganisms. General biology of microorganisms. Practical applications of fundamental principles to industry, agriculture and health. (Prereq sophomore with C avg in prereq courses to major sequence or junior with 10 cr in chemistry and 5 cr in biological sciences or #. Microscope required. [Inquire at first class meeting about rental.]

Winter Qtr Sec 1 Lect MW—6:15-7:45, MoosT 2-690

Lab MW—7:45-10, MoosT 2-252, Bey

MicB 5218 IMMUNOLOGY. 3 degree credits, \$186.

Nature of antigens and antibodies; chemical basis of serologic specificity; qualitative and quantitative aspects of antigen-antibody reactions; theories of antibody production; cellular antigens and blood grouping; nature of complement and its role in immunologic phenomena; mechanisms of hypersensitivity; hypersensitivity-like states and immunologic diseases; transplantation and tumor immunity; host-parasite interactions. (Prereq Biol 3021 or Biol 5001. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 T—6:15-8:45, MoosT 2-520

Middle Eastern and South Asian Studies

South and Southwest Asian Studies

College of Liberal Arts

Textbooks for most MESA, Arab, Hindi, and Pers courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

Iraj Bashiri, Associate Professor of South and Southwest Asian Studies

Caesar Farah, Professor of South and Southwest Asian Studies

David Lelyveld, Associate Professor of History and South and Southwest Asian Studies

Arabic (Arab)

Arab 1201 COLLOQUIAL ARABIC. 5 degree credits, \$185.

Introductory course intended primarily for business persons and travelers. Fundamentals of vocabulary and sentence structure, introduction to Arabic script. (No prereq)

Spring Qtr Sec 1 M—6:10-10:05, FolH 103

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Middle Eastern and South Asian Studies (MESA)

MESA 3505 SURVEY: THE MIDDLE EAST. 4 degree credits, \$MESA 5505, \$Hist 3505, \$154. (♦\$77)

A survey of the lands and peoples of the Middle East, historical evolution of Middle East civilizations and societies, and the status of Middle East countries in world affairs. (No prereq. Meets concurrently with Hist 3505)

Fall Qtr Sec 1 **M**—6:20-8:50, BlegH 440, Farah

MESA 3544 THE ARAB WORLD IN RECENT TIMES. 4 degree credits, \$Hist 3544, \$154. (♦\$77)

The central Arab lands (the Arabian peninsula, Iraq, Syria, Jordan, Lebanon, Egypt) and the North African region (Libya, Tunisia, Morocco, Algeria) from end of World War I to the present. Foreign occupation and the struggle for independence; position in regional and international politics. (No prereq. Meets concurrently with Hist 3544)

Spring Qtr Sec 1 **M**—6:20-8:50, AndH 330, Farah

MESA 3456 THE CINEMA OF INDIA. 4 degree credits, \$154 plus \$20 course fee. Total \$174. (♦\$77 plus \$20 course fee. Total \$97)

Follows historical lines, starting with a survey of Indian drama and visual arts, the introduction of photography and the establishment of the film industry in 1912. Subject to the availability of early films, the course will study the development of film genres in India, the regional and national cinema, the studio and star systems, film journalism, the non-commercial cinema, censorship, women in cinema, music and dance, religion, violence and social tensions. (No prereq)

Spring Qtr Sec 1 **T**—6:20-8:50, FolH 107, Lelyveld

OMESA 3601 PERSIAN FICTION IN TRANSLATION. 4 degree credits, \$MESA 5601, \$154.

Major Persian works: *The Blind Owl* by Hedayat, *The Patient Stone* by Chubak, and *The Wedding* by Se'edi. (No prereq. A joint Day/Extension class)

Winter Qtr Sec 1 **T**—4:15-6, FolH 107, Bashiri

OMESA 3602 PERSIAN POETRY IN TRANSLATION. 4 degree credits, \$MESA 5602, \$154.

Major poetic works of Iran: quatrains of Omar Khayyam, sonnets of Hafiz; "new" Persian poetry such as the works of Forugh Farrokhzah. (No prereq. A joint Day/Extension class)

Fall Qtr Sec 1 **T**—4:15-6, FolH 303, Bashiri

OMESA 3612 LANGUAGE AND SOCIETY IN IRAN. 4 degree credits, \$154.

A survey of Asian and Modern Iranian language groups and their relationship to the ethnic, social, and political dynamics of Iran and the Middle East. (No prereq. A joint Day/Extension class)

Spring Qtr Sec 1 **T**—4:15-6, FolH 107

Persian (Pers)

OPers 1101-1102-1103 BEGINNING PERSIAN. 5 degree credits each quarter, \$185 each quarter.

Audiolingual course in spoken and written modern Persian. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103. A joint Day/Extension class)

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Fall Qtr	1101	Sec 1	M —4:15-6, FolH 107, Bashiri W —4:15-6, FolH 107 Th —4:15-5, FolH 107
Winter Qtr	1102	Sec 2	M —4:15-6, FolH 52, Bashiri W —4:15-6, FolH 52 Th —4:15-5, FolH 52
Spring Qtr	1103	Sec 3	M —4:15-6, FolH 52, Bashiri W —4:15-6, FolH 52 Th —4:15-5, FolH 52

Turkish (Turk)

Turk 1101-1102-1103 BEGINNING TURKISH. 5 degree credits each quarter, \$185 each quarter.

An introduction to Turkish language, providing vocabulary forms and syntax through intensive graded readings and speaking. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103)

Fall Qtr	1101	Sec 1	T —6:10-10:20, CivMinE 214
Winter Qtr	1102	Sec 2	T —6:10-10:20, FolH 52
Spring Qtr	1103	Sec 3	T —6:10-10:20, FolH 52

Military Science (Mil)

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 376-3000 two weeks before mail registration for that quarter begins.

Minnesota Courses

(For courses about the State of Minnesota, see the following departments: History, Geography, Industrial Relations, Informal Courses, and Political Science; and General College courses)

Modern Greek

(See listing following Greek)

Music (Mus)

College of Liberal Arts

Most textbooks for Mus courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

(See also music courses in General College and Music Education; MacPhail Center for the Arts; Informal Courses; and Continuing Education for Women)

Connie Arrau, Instructor in Music
Frank Bencriscutto, Professor of Music

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Mark P. Bjork, Assistant Professor of Continuing Education
 Dwayne Jorgenson, Associate Professor of Music
 Alan Kagan, Associate Professor of Music
 Thomas Lancaster, Professor of Music
 Adrian Lauritzen, Associate Professor of Music
 Richard Massmann, Professor of Music
 Gwendolyn C. Perun, Associate Professor of Continuing Education
 Johannes Riedel, Professor of Music
 O'Neil Sanford, Associate Professor of Music
 Everett Sutton, Professor of Music
 Clifton Ware, Instructor in Music

Noncredit Courses

Applicants who wish to enroll for noncredit instruction in applied music should contact the MacPhail Center—telephone 373-1925—for information about availability of instruction, and tuition and fee costs. Also see the General College section of this Bulletin and Informal Courses.

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 376-3000 two weeks before mail registration for that quarter begins.

★Mus 1051-1052-1053 **PIANO CLASS FOR NON-MUSIC MAJORS.** 2 degree credits each quarter, \$74 each quarter.

Designed primarily for the person with no piano background. Basic keyboard skills of sight-reading, harmonization, transposition, and improvisation for non-music majors. (No prereq for 1051; 1051 for 1052; 1052 for 1053. Limited to 24)

Fall Qtr 1051 Sec 1 T—6:20-8:20, MusEd 200

Winter Qtr 1052 Sec 2 T—6:20-8:20, MusEd 200

Spring Qtr 1053 Sec 3 T—6:20-8:20, MusEd 200

★Mus 1160 **VOICE: CLASS LESSONS.** 2 degree credits, \$74.

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 20)

Fall Qtr Sec 1 M—6:30-8, ScottH 19, Ware

Mus 1171-1172 **GUITAR: CLASS LESSONS.** 2 degree credits each quarter, \$74 each quarter.

Fundamentals for the beginning folk-guitarist. Progressive development of skills; **1171:** basic strumming techniques, harmonizations in basic keys; **1172:** advanced strumming techniques, bass runs, finger-picking strums. (Student must furnish own guitar.) (No prereq for 1171; 1171 for 1172)

Fall Qtr 1171 Sec 1 T—6:20-8:20, ScottH 103

Winter Qtr 1171 Sec 2 M—6:20-8:20, ScottH 103

1172 Sec 3 T—6:20-8:20, ScottH 103

Spring Qtr 1171 Sec 4 M—6:20-8:20, ScottH 3

Read about abbreviations, symbols, and maps on page 60.
 Courses and sections in red have limits on enrollment. See page 20.

Group performance

Students must audition for all of the group performance music classes. Auditioning should be arranged with the instructor in advance of the class opening.

◉Mus 1410 BAND. 1 degree credit, \$37.

Rehearsals and appearances cover standard band literature; several appearances each quarter. (Prereq #. Class meets 2, 3 or 4 days a week by arrangement. Students are advised to arrange auditions and class meeting days with Professor Bencriscutto, telephone 373-3431, prior to registration. A joint Day/Extension class)

Fall Qtr Sec 1 **Days arr.** 3:15-5:05, NMA 4, Bencriscutto, Sanford

Winter Qtr Sec 2 **Days arr.** 3:15-5:05, NMA 4, Bencriscutto, Sanford

Spring Qtr Sec 3 **Days arr.** 3:15-5:05, NMA 4, Bencriscutto, Sanford

◉Mus 1420 ORCHESTRA. 1 degree credit, \$37.

Standard orchestral literature performed. Open to players of orchestral instruments from Twin Cities. Those enrolled with consent of chairman of Music Department are given the opportunity of rehearsing with the University Symphony and participating in a concert given in Northrop Auditorium. (Prereq #. A joint Day/Extension class)

Fall Qtr Sec 1 **MTTh**—3:15-5:00, WullH 320, Massmann

Winter Qtr Sec 2 **MTTh**—3:15-5:00, WullH 320, Massmann

Spring Qtr Sec 3 **MTTh**—3:15-5:00, WullH 320, Massmann

◉Mus 1430 UNIVERSITY CHORUS. 1 degree credit, \$37.

Performances of major symphonic-choral works with the Minnesota Orchestra, University Symphony Orchestra, and University Concert Band. (Prereq #. Extension students may choose whether or not to attend one of the MWF daytime sections, but must attend the evening section. A joint Day/Extension class)

Fall Qtr Sec 1 **MWF**—11:15-12:05, NMA 4, Jorgenson

Sec 2 **MWF**—1:15-2:05, NMA 4, Jorgenson

Sec 3 **T**—7-9:30, SciCB 325, Jorgenson

Winter Qtr Sec 4 **MWF**—11:15-12:05, NMA 4, Jorgenson

Sec 5 **MWF**—1:15-2:05, NMA 4, Jorgenson

Sec 6 **T**—7-9:30, SciCB 325, Jorgenson

Spring Qtr Sec 7 **MWF**—11:15-12:05, NMA 4, Jorgenson

Sec 8 **MWF**—1:15-2:05, NMA 4, Jorgenson

Sec 9 **T**—7-9:30, SciCB 325, Jorgenson

◉Mus 1430 MEN'S CHORUS. 1 degree credit, \$37.

Rehearsals and performances cover standard men's glee club material as well as special arrangements. Group appears for on- and off-campus functions. (Prereq #. A joint Day/Extension class)

Fall Qtr Sec 10 **MWF**—12:15-1:05, NMA 4, Jorgenson

Winter Qtr Sec 11 **MWF**—12:15-1:05, NMA 4, Jorgenson

Spring Qtr Sec 12 **MWF**—12:15-1:05, NMA 4, Jorgenson

◉Mus 5490 CHAMBER SINGERS. 2 degree credits, \$77.

A small mixed vocal ensemble of select voices. Sacred and secular music from 16th century to contemporary composers prepared for concert presentation. (Prereq #.

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **MF**—4:15-5:30, WullH 7A, Lancaster
W—3:15-5, WullH 7A, Lancaster

Winter Qtr Sec 2 **MF**—4:15-5:30, WullH 7A, Lancaster
W—3:15-5, WullH 7A, Lancaster

Music theory, history, literature, pedagogy

Mus 1001 FUNDAMENTALS OF MUSIC. 4 degree credits, \$148.

Study of basic musical symbols, vocabulary, rhythm, design, scale structures, intervals, chords. The development of basic piano skills; the playing of simple accompaniments. Required of students in elementary, primary, kindergarten, and nursery school education; also recommended for the layman interested in a basic introduction to music; not for music majors. (No prereq)

Fall Qtr Sec 1 **M**—6:10-9:20, MusEd 200, Lauritzen

Winter Qtr Sec 2 **M**—6:10-9:20, MusEd 200, Lauritzen

Spring Qtr Sec 3 **M**—6:10-9:20, MusEd 200, Lauritzen

Mus 1501-1502-1503 THEORY I. 3 degree credits each quarter, \$111 each quarter. (♦\$55.50) (IS 1501)

1501: Rudiments; writing, analysis, and performance of monophony and two-voice texture; basic contrapuntal techniques, phrasing, and cadential types. **1502:** Writing, analysis, and performance of three- and four-voice textures; free and imitative counterpoint, basic harmonic relationships, and short vocal forms (e.g., ballade, and virelai). **1503:** Writing, analysis, and performance of free and imitative counterpoint and basic harmony; secondary dominants, modulation, figured bass, and accompanied-line keyboard styles (e.g., early baroque fantasia). (No prereq for 1501; 1501 for 1502; 1502 for 1503. Students with very limited musical experience may be interested in Mus 1001, a more elementary course in music)

Fall Qtr 1501 Sec 1 **T**—6:20-8:50, ScottH 4

Winter Qtr 1502 Sec 2 **T**—6:20-8:50, ScottH 4

Spring Qtr 1503 Sec 3 **T**—6:20-8:50, ScottH 4

Mus 1511-1512 EAR-TRAINING AND SIGHT-SINGING I. 1 degree credit each quarter, \$37 each quarter. (IS)

Melodic, harmonic, and rhythmic dictation; sight-singing; clef-reading; musicianship drills. (No prereq. Concurrent registration with Mus 1501, 1502 recommended)

Fall Qtr 1511 Sec 1 **W**—6:20-8:30, ScottH 4

Winter Qtr 1512 Sec 2 **W**—6:20-8:30, ScottH 4

Mus 3021 INTRODUCTION TO MUSIC. 5 degree credits, \$192.50. (♦\$96.25)

Introduction to music in the repertory of our culture, exploring selected forms and styles from the 17th through 20th centuries. Aural analyses, relationships of large units of musical form. (No prereq)

Fall Qtr Sec 1 **W**—6:10-9:30, WullH 320, Sutton

◉Mus 5351-5352-5353 PIANO PEDAGOGY I. 2 degree credits each quarter, \$77 each quarter.

Demonstration and discussion of group piano instruction at the elementary level. Literature appropriate to conceptual learning through the discovery approach.

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

(Prereq 12 cr in 1101 or 1201 or 1301 or 1151-1152-1153 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr 5351 Sec 1 T—9:15 a.m.-11, MusEd 200, Arrau

Winter Qtr 5352 Sec 2 T—9:15 a.m.-11, MusEd 200, Arrau

Spring Qtr 5353 Sec 3 T—9:15 a.m.-11, MusEd 200, Arrau

See also Radio Course, Mus 5702, 20th-Century American Music, page 551.

Mus 5711, 5712 AMERICAN POPULAR MUSIC. 4 degree credits each quarter, \$154 each quarter. (♦\$77 each quarter) (IS 5711)

History of popular music in the U.S. from the first half of the 19th century through 1970—the lyrics and music, composers, performers, bands. Its various types and forms. The contribution of black music to popular music in cakewalk, protest music, ragtime, jazz, and rock. The impact of American popular music on popular music of the world. The impact of popular music on church music throughout the ages. *Two additional credits for American Popular Music Laboratory for credit, \$77.* (See "X" registration [page 46].) *Students registered on any of the no-credit reduced-tuition plans (see page 48) may also register for the laboratory, but only on a no-credit basis, for \$38.50.* (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr 5711 Sec 1 Th—6:20-8:30, ScottH 103, Riedel

Spring Qtr 5712 Sec 2 Th—6:20-8:30, ScottH 103, Riedel

Mus 5804 FOLK AND TRADITIONAL MUSIC: CROSS-CULTURAL SURVEY. 4 degree credits, \$154. (♦\$77)

Music of the peoples of the world in topical and geographic format. Comparative study of musical styles, behavior, and concepts in varied societies and cultures. Field recordings and filmed performances. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—6:20-8:30, ScottH 19, Kagan

Mus 5950 TOPICS IN MUSIC: SUZUKI PEDAGOGY. 2 degree credits each quarter, \$77 each quarter.

This three-quarter course will provide for an intensive examination of the philosophy and teaching techniques of the Japanese string Pedagogue, Shinichi Suzuki. Each quarter will be devoted to an in-depth study of a specific level of Suzuki pedagogy and will involve the student in discussions and practical playing experience. Students will be expected to observe teachers and pupils in the MacPhail Center (1128 LaSalle Ave. in downtown Minneapolis) Suzuki Program and to perform during the seminars with the instructor. **For complete information about the course, contact Mark Bjork at MacPhail, 373-1925.** (Prereq undergraduate or graduate string major or #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 2 Arr., Bjork

Winter Qtr Sec 3 Arr., Bjork

Spring Qtr Sec 4 Arr., Bjork

See also Radio Course, Mus 5950, Music Appreciation, page 551.

For information about a course in piano tuning, see MacPhail Center Courses.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Music Education (MuEd)

College of Education

Textbooks for most MuEd courses available at the Minnesota Book Center in Williamson Hall (373-3688)

Robert Borg, Associate Professor
Arnold Caswell, Professor
Stephen Schultz, Associate Professor
Edgar Turrentine, 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.

See page 24 for information regarding reopenings that may occur prior to the start of the term.

OMuEd 5111 RESEARCH IN MUSIC EDUCATION: BIBLIOGRAPHY. 3 degree credits, \$141.75.

Sources, materials, and techniques. **May not be taken S-N.** (Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 W—4:15-6, ScottH 103, Turrentine

OMuEd 5112 RESEARCH IN MUSIC EDUCATION: TECHNIQUES. 3 degree credits, \$141.75.

Methods and techniques employed in investigating and reporting of music education problems; review of significant research. **May not be taken S-N.** (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, ScottH 103, Turrentine

OMuEd 5115 RESEARCH IN MUSIC EDUCATION: MEASUREMENT. 3 degree credits, \$141.75.

Current status of music testing; principles; survey of evaluative, accountability, and testing materials in music. **May not be taken S-N.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 W—4:15-6, ScottH 103, Turrentine

OMuEd 5211 PHILOSOPHIES OF MUSIC EDUCATION. 3 degree credits, \$141.75.

Analysis and interpretation of philosophies in music and education; objectives, trends, curriculum, evaluation. **May not be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 M—4:15-6, ScottH 103, Borg

OMuEd 5633 TECHNIQUES AND MATERIALS: CHORAL ENSEMBLES. 3 degree credits, \$141.75.

Empirical research and literature on voice development in individual, class, and choral work, individual surveys of performance practices and organization of school
(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

m-n

vocal groups. Selection of vocal music. **May not 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 **Th**—4:15-6, ScottH 4, Caswell

A wide variety of workshops in music education is available to local school districts who wish to jointly design a continuing education experience to meet unique local needs.

For further information in regard to planning an individually designed workshop for a particular district or building staff contact: Chairman, Music Education Program, 104 Scott Hall, 72 Pleasant Street S.E., University of Minnesota, Minneapolis, MN 55455; or telephone 373-3452.

Also see MacPhail Center for the Arts courses on page 521.

N

Natural Science and Technology (NSci)

College of Liberal Arts

(See also General College natural science courses)

No courses offered 1984-85.

Naval Science (Nav)

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 376-3000 two weeks before registration for that quarter begins.

Near and Middle Eastern Studies

(See Ancient, Near Eastern and Jewish Studies, and Middle Eastern and South Asian Studies)

Neighborhood Centers

(See page 628)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Noncredit Classes

(See the **Noncredit Courses** section, page 441)

Norwegian

(See Scandinavian Languages)

Nursing (Nurs)

School of Nursing

Textbooks for most Nurs courses are available at the Health Sciences Bookstore (376-4007)

(See also Phsl 5094-5095, Human Physiology)

Mary Jackle, Director, Critical Care Education Project

Evening courses offered by the School of Nursing provide opportunities for registered nurses who are interested in continuing their education.

The course numbers prefaced by a "3" or "5" indicate credits which may be applied toward the requirements of a bachelor of science in nursing. These credits are applicable toward the nursing degree only if the student enrolls in the School of Nursing within 3 years of the date of course completion.

Course numbers prefaced by an "8" indicate graduate credit and may be applied toward a master's degree in nursing.

There are also many general education courses offered in Extension Classes which may be taken for degree credit. Final decision as to the applicability of these credits toward a degree offered by the School of Nursing is the responsibility of the School's Admission Committee.

Registered nurses who wish to continue their studies toward a degree program in nursing are urged to contact the School of Nursing, 5-140 HSUnitF, 308 Harvard St. S.E. (telephone 373-3462) and ask for an appointment.

★**Nurs 5700 CRITICAL CARE NURSING.** 5 degree credits. See registration and tuition information below.

A University of Minnesota School of Nursing and Metropolitan Medical Center course offered through Extension Classes. Intended for the registered nurse, this course covers biophysical and psychological crises. Topics include circulation, respiration, renal problems, neurology, stress, and crisis intervention. Methods of instruction include group meetings, supervised clinical experiences, and individualized instruction. **Must be taken S-N.** (Prereq RN and employment in hospital for past 6 months. May not be taken for graduate credit. Each section limited to 20)

Spec Term Sec 1 **Sept. 17-Oct. 19, 1984 MTh—8 a.m.-2:30**
group meetings;

TWF—open schedule to accommodate clinical experience, individualized instruction, work and family obligations
(Registration information follows.)

Sec 2 **Jan. 7-Feb. 8, 1985** same time schedule as above
(Registration information follows.)
(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

- Sec 3 **Apr. 8-May 10, 1985** same time schedule as above
(**Registration information follows.**)
- Sec 4 **June 3-July 3, 1985** same time schedule as above
(**Registration information follows.**)

All sections held at Metropolitan Medical Center, Minneapolis

Tuition:

Academic credit option, \$360. Continuing Education Unit (7.4 CEUs) option, \$275. Textbooks, \$44.85. Students who register under the CEU option **may not** petition for transfer to academic credit option at a later date.

Students may not use Regents' Scholarships to register in Nurs 5700.

Information regarding arrangements for payment of tuition for each option will be sent with registration materials.

Registration: telephone 347-4659 for information and registration materials.

By mail, write to Community Education Department, Metropolitan Medical Center, 900 South Eighth Street, Minneapolis, MN 55404

Continuing Nursing Education

Degree credit courses will be offered as evening classes in 1984-85. These courses may be applied to credit requirements for the University of Minnesota B.S.N. program designed for registered nurses if approved on an individual basis after admission to the program (prerequisite: R.N.).

To obtain a complete course schedule and registration materials, contact Continuing Nursing Education, 107 Armory, 15 Church St. S.E., University of Minnesota, Minneapolis, MN 55455; (612) 373-5831.

Registered nurses who wish to continue their studies toward a degree in nursing should contact the School of Nursing, 5-140 UnitF, 308 Harvard St. S.E., University of Minnesota, Minneapolis, MN 55455; (612) 373-3462.

O

Obstetrics

(See Family Planning Administration)

Operations Management (OM)

School of Management

Textbooks for most OM courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450)

John C. Anderson, Associate Professor of Management Science

Roberta A. Armstrong, Director of Information Systems and Services, Office of Student Affairs

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Vicki L. Smith-Daniels, Assistant Professor of Management Science
Arthur V. Hill, Associate Professor of Management Science
Thomas R. Hoffmann, Professor of Management Science
Susan Keim, Manufacturing Instructor, Comserv
Ronald Klietsch, CEE Coordinator
Brian Kovalchuk, Controller, CPT Corporation
Roger G. Schroeder, Professor of Management Science
Gary Scudder, Assistant Professor of Management Science
Mark Treleven, Assistant Professor of Management Science

Business degree students must take Operations Management courses A-N.

★**OM 3000 INTRODUCTION TO OPERATIONS MANAGEMENT.** 4 degree credits, \$179 plus \$8.50 course fee. Total \$187.50.

Concepts and principles related to the management of operations functions, taught from a managerial perspective. Examples from service industries, nonprofit organizations, and manufacturing are used. Relationships to the environment and other functional areas, such as marketing and finance are covered. Topics include operations strategy, forecasting, process selection, capacity management, scheduling, quality planning and control, inventory management, productivity and work standards. (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 155

Sec 2 **W**—5:30-8:50, BlegH 155

Winter Qtr Sec 3 **M**—5:30-8:50, BlegH 120

Sec 4 **Th**—5:30-8:50, BlegH 130

Spring Qtr Sec 5 **T**—5:30-8:50, AndH 230

Sec 6 **Th**—5:30-8:50, BlegH 235

★**OM 3041 PROJECT MANAGEMENT.** 4 degree credits, \$179 plus \$8.50 course fee. Total \$187.50.

Principles and methods useful for planning and controlling a project. Topics include developing a project plan, resource planning and scheduling, and project monitoring and evaluation. Various computerized packages will be studied, including PERT and CPM. Examples of different types of projects from manufacturing and service industries are used. (Prereq 3000 and at least 90 credits completed or in progress. **Open to nondegree students with equivalent experience.** Limited to 50)

Fall Qtr Sec 1 **T**—5:30-8:50, BlegH 135

Spring Qtr Sec 2 **M**—5:30-8:50, BlegH 135

★**OM 3056 PRODUCTION AND INVENTORY MANAGEMENT.** 4 degree credits, \$179 plus \$8.50 course fee and \$4 special fee. Total \$191.50.

The functions of forecasting, inventory control, materials requirements planning, capacity planning, and scheduling are covered. Taught from a planning and control point of view, with applications in manufacturing and service industries. Computer packages are used and evaluated. (Prereq 3000 and at least 90 credits completed or in progress. **Open to nondegree students with equivalent experience.** Limited to 30)

Fall Qtr Sec 1 **M**—5:30-8:50, Law 1

Spring Qtr Sec 2 **M**—5:30-8:50, Law 1

Ophthalmology

(Your attention is called to the Ophthalmology Technician Certificate in the Degrees and Certificates section of this Bulletin)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

P

Persian

(See Middle Eastern and South Asian Studies)

Personal Orientation (PO)

College of Liberal Arts

Textbooks for most courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

(See also Rhetoric; General College; IC 0590, Rapid Reading and Comprehension; and other study helps, page 549. For information about a free course on how to use University libraries, see page 498)

A student who does not attend the first class meeting of a PO course will not be allowed to continue. A written verification of non-attendance must be obtained from the instructor for a student to receive a 100% tuition refund.

★**PO 1001 HOW TO STUDY.** 2 degree credits. (Credits do not count toward a B.A. degree; however, grades are included in the over-all grade point average.) \$74 plus \$2 course fee and \$30 special fee. Total \$106. (IS)

Practical assistance to the student in developing efficient study habits, organizing materials, preparing for examinations, and improving the speed and comprehension of reading. Diagnosis and practice in basic skill areas such as reading, spelling, vocabulary and elementary composition are also provided. (No prereq. Limited to 30)

Fall Qtr Sec 1 W—6:20-8:50, EddyH 102

Pharmacognosy (Phcg)

College of Pharmacy

Textbooks for most Phcg courses are available at the Health Sciences Bookstore (376-4007)

Burton W. Galle, Assistant Professor
John Staba, Professor of Pharmacognosy

★**Phcg 1800 NATURE'S REMEDIES.** 3 degree credits, \$111

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 tasting. **Must be taken S-N.** (No prereq. Limited to 50)

Spring Qtr Sec 1 T—6:20-8:50, HSUnitF 7-193, Staba

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Pharmacy (Phar)

College of Pharmacy

Textbooks for most Phar courses are available at the Health Sciences Bookstore (376-4007)

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Pharmacy. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

Phar 5008 HUMANITIES AND AGING. 2 degree credits, \$HSU 5030, \$105.50.

An examination of aging—through the perspectives of literature, music, art, philosophy, and history. Discussion will focus on such topics as the historical experience of today's elderly cohort, paternalism, generational conflict, cross-cultural ceremonies of aging, and changing attitudes toward the elderly in America. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HSU 5030. A joint Day/Extension class)

Spring Qtr Sec 1 **W**—4:15-6, HSUnitF 2-120, 2-130, Galle

Phar 5009 MULTIDISCIPLINARY PERSPECTIVES ON AGING. 4 degree credits, \$HSU 5009, \$CPsy 5305, \$Educ 5440, \$PA 5671, \$SW 5024, \$Soc 5960, \$PubH 5646, \$211.

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; public policy and legislation; environments and housing; advocates; retirements. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HSU 5009, PA 5660 sec 1, Educ 5440, Soc 5960, and SW 5024. A joint Day/Extension class)

Fall Qtr Sec 1 **MW**—4:15-6, MoosT 2-620

See also Television Course, Phar 5009, *Multidisciplinary Perspectives on Aging*, page 551.

Phar 5210 TERMINOLOGY OF THE HEALTH SCIENCES. 2 degree credits, \$HSU 5210, \$105.50.

An independent study course which meets biweekly for tests. Day and time for tests arranged at the beginning of each term (call 373-9146). No lectures or formal class sessions other than test periods, but conference hours are available for informal discussion. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HSU 5210. A joint Day/Extension class)

Fall Qtr Sec 1 **Arr** (call 373-9146), Bast

Winter Qtr Sec 2 **Arr** (call 373-9146), Bast

Spring Qtr Sec 3 **Arr** (call 373-9146), Bast

Phar 5305 HUMANISTIC CASE STUDIES IN HEALTH CARE. 3 degree credits, \$HSU 5029, \$Engl 5910, sec 2, \$158.25.

An exploration of health care issues through their embodiment in selected modern plays and novels. Discussion focuses on the full human context in which health care

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

decisions are made. Themes investigated include terminal care, the practitioner-patient relationship, the elderly patient, mental health and madness, and the politics of health care institutions. Not a course in literary analysis. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Engl 5910 and HSU 5029)

Winter Qtr Sec 1 Th—4:15-6, HSUnitF 2-140, Galle

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., Health Sciences Unit F, Minneapolis, MN 55455. Telephone (612) 376-5313.

Philosophy (Phil)

College of Liberal Arts

Textbooks for most Phil courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

Norman Dahl, Associate Professor of Philosophy

John M. Dolan, Associate Professor of Philosophy

Keith Gunderson, Professor of Philosophy

William H. Hanson, Professor of Philosophy

Jasper S. Hopkins, Professor of Philosophy

Douglas E. Lewis, Professor of Philosophy

Joseph I. Owens, Assistant Professor of Philosophy

A MAJOR IN PHILOSOPHY CAN BE COMPLETED IN THE EVENING.

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

B.A. Major Sequence

A coherent major program signed by an adviser (samples of coherent major programs are available from the Director of Undergraduate Studies)

Phil 1002 (1102), Introduction to Philosophy

Phil 1001 or 3201, Logic

Phil 3001 and Phil 3003, History of Philosophy

Phil 3105 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—373-3612)

At least nine four- or five-credit courses at the 3000 or 5000 level with grades of C or higher (exception: two courses may have grades of S), at least three of which are 5000-level courses, and at least four of which are courses completed at the University of Minnesota.

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 (373-3612).

(Consult the department for possible changes in major or minor sequences)

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

Students interested in the major or minor should call Extension Counseling for more information (373-3905).

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

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 376-3000 two weeks before mail registration for that quarter begins.

Phil 1001 LOGIC. 5 degree credits, \$185. (♦\$92.50) (IS)

Application of formal techniques for evaluating arguments. (No prereq)

Fall Qtr Sec 1 T—6:20-8:50, FordH 130

Winter Qtr Sec 2 W—6:20-8:50, FordH 120

Spring Qtr★Sec 3 M—6:20-8:50, Minnetonka HS 119, (Limit 30)

Sec 4 T—6:20-8:50, FordH 150

Phil 1002 INTRODUCTION TO PHILOSOPHY. 5 degree credits, \$185. (♦\$92.50) (IS)

Problems, principal methods and schools of philosophy; historical and contemporary views. (No prereq)

Fall Qtr Sec 1 W—6:20-8:50, FordH 130

Sec 2 Th—9 a.m.-12, MacP

Offered through Continuing Education for Women

Winter Qtr Sec 3 T—6:20-8:50, FordH 255

Spring Qtr Sec 4 Th—6:20-8:50, FordH 120

Phil 1003 ETHICS. 5 degree credits, \$185. (♦\$92.50)

Problems that arise when human beings attempt to think systematically about conduct and value. (No prereq)

Fall Qtr Sec 1 Th—6:20-8:50, FordH 120

Spring Qtr Sec 2 W—6:20-8:50, FordH 130

Phil 1004 INTRODUCTION TO POLITICAL PHILOSOPHY. 5 degree credits, \$185. (♦\$92.50)

An introduction to some of the central concepts and principal theories of political philosophy. (No prereq)

Winter Qtr Sec 1 Th—6:20-8:50, FordH 160, Root

Phil 3001 GENERAL HISTORY OF WESTERN PHILOSOPHY. 5 degree credits, \$192.50. (♦\$96.25) (IS)

Survey of major developments in Western philosophic thought: Greek philosophy, pre-Socratics, Socrates, Plato, Aristotle. (No prereq. May be applied toward the CLA second language requirement, Route II for Greek and Latin [see page 562])

Fall Qtr Sec 1 M—6:20-8:50, FordH 170, Dahl

Phil 3003 GENERAL HISTORY OF WESTERN PHILOSOPHY. 5 degree credits, \$192.50. (♦\$96.25) (IS)

Discusses six topics as they relate to the philosophies of five 17th- and 18th-century philosophers: Descartes, Malebranche, Locke, Berkeley, and Hume. (1) The nature and existence of God; (2) nature of material substance; (3) role of the senses in human

(continued next page)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

knowledge; (4) nature and origin of human ideas; (5) relationship between mind and body; (6) nature of causality. Also, 16th- and 17th-century developments in astronomy, physics, and cosmology are discussed. (No prereq)

Winter Qtr Sec 1 **M**—6:20-8:50, FordH 170, Lewis

Phil 3004 GENERAL HISTORY OF WESTERN PHILOSOPHY. 5 degree credits, \$192.50. (♦\$96.25) (IS)

Survey of major developments in Western philosophic thought. Later modern philosophy from Kant through 19th century. (No prereq)

Spring Qtr Sec 1 **M**—6:20-8:50, FordH 160, Gunderson

Phil 3201 SYMBOLIC LOGIC I. 5 degree credits, \$5201, \$192.50. (♦\$96.25)

An introduction to the fundamentals of symbolic logic. The major topics will be the syntax and semantics of certain basic formalized languages, translation between English and these languages, and the use of precise techniques for evaluating arguments. (No prereq. Meets concurrently with 5201)

Winter Qtr Sec 1 **W**—6:20-8:50, FordH 160, Hanson

Phil 3202 SYMBOLIC LOGIC II. 5 degree credits, \$5202, \$192.50. (♦\$96.25)

Further study of first-order predicate logic: identity, axiomatic development. Various metatheorems: soundness, consistency, and completeness. (Prereq 3201 or #. Meets concurrently with 5202)

Spring Qtr Sec 1 **T**—6:20-8:50, FordH 160, Hanson

Phil 3302 MORAL PROBLEMS OF CONTEMPORARY SOCIETY. 5 degree credits, \$192.50. (♦\$96.25)

The study of a number of articles that address, in a direct and fairly concrete manner, such topics as "euthanasia," abortion, American foreign policy, and "reverse discrimination." Students will also study several technical articles in moral philosophy with the object of deepening and sharpening the grasp of moral reasoning. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, FordH 170, Dolan

Phil 3311 INTRODUCTION TO ETHICAL THEORY. 4 degree credits, \$154. (♦\$77)

Nature and justification of moral judgments and moral principles; analysis of representative moral views. (No prereq)

Spring Qtr Sec 1 **Th**—6:20-8:50, FordH 170

Phil 5101 METAPHYSICS. 4 degree credits, \$154. (♦\$77)

Philosophical theories concerning the nature of reality. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **T**—6:20-8:50, FordH 160, Dolan

Phil 5201 SYMBOLIC LOGIC I. 5 degree credits, \$3201, \$192.50.

An introduction to the fundamentals of symbolic logic. The major topics will be the syntax and semantics of certain basic formalized languages, translation between English and these languages, and the use of precise techniques for evaluating arguments. (No prereq. Meets concurrently with 3201. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **W**—6:20-8:50, FordH 160, Hanson

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Phil 5202 SYMBOLIC LOGIC II. 5 degree credits, \$3202, \$192.50.

See description for Phil 3202. (Prereq 3201 or 5201 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3202)

Spring Qtr Sec 1 T—6:20-8:50, FordH 160, Hanson

Phil 5521 PHILOSOPHY OF RELIGION. 4 degree credits, \$154. (◆\$77)

Grounds and sanctions of religion, according to various philosophies. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 T—6:20-8:50, KoltH S135, Hopkins

Phil 5615 MINDS, BODIES, AND MACHINES. 4 degree credits, \$154. (◆\$77)

Philosophical relevance of cybernetics, artificial intelligence, and computer simulation. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 W—6:20-8:50, FordH 160, Owens

Photography

(See Art History; Studio Arts; General College; Informal Courses; and Journalism)

Physical Education (PE)

College of Education

(School of Physical Education, Recreation, and School Health Education)

Textbooks for most PE courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

(See also Dance, School Health Education, Recreation, Informal Courses; and MacPhail Center for the Arts)

Thomas Aarrestad, Teaching Assistant
Barbara Ainsworth, Teaching Assistant
Susan Breihan, Assistant Professor
Peter Davis, Teaching Assistant
Robert Fusaro, Teaching Specialist
Randy Griffith, Teaching Assistant
John Holm, Teaching Specialist
Richard Jacobson, Lecturer
Mary B. Lampe, Associate Professor
James Larson, Teaching Assistant
James Marshall, Lecturer

Jeralyn Plack, Professor
Peter Rattigan, Teaching Assistant
Carole Schneider, Teaching Assistant
Robert Serfass, Associate Professor
Jacqueline Shick, Associate Professor
Lela June Stoner, Associate Professor
Karen Stube, Teaching Assistant
Michelle Waite, Teaching Assistant
Bruce Whitney, Teaching Assistant
David Wu, Teaching Assistant
Mary L. Young, Associate Professor

School of Physical Education, Recreation, and School Health Education CONTINUING EDUCATION

A wide variety of programs in school health education, physical education, dance, and recreation is available to local school districts who wish to jointly design a continuing education experience to meet unique local staff needs. For further information in regard to individually designed programs for a particular district or building staff contact: Mary Lampe, Coordinator, Continuing Education for the School of Physical Education, Recreation, and School Health Education, Norris Hall, 172 Pillsbury Drive S.E., University of Minnesota, Minneapolis, MN 55455; or call (612) 373-3206.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Some physical education classes carry no credit and require no prerequisite. A health examination is required for admission to all children's physical education classes. It is assumed that the health of adults registering for recreation classes will be equal to the demands of the activities in which they are to participate.

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 degree credit, \$37.

Designed for the beginner including aquatic breathing, floating, treading water, finning, human stroke, elementary backstroke, sidestroke, front crawl. (No prereq. Limited to 25)

Fall Qtr Sec 1 **M**—6:10-8:10, NorrisH 51, Stube

Winter Qtr Sec 2 **M**—6:10-8:10, NorrisH 51, Waite

Spring Qtr Sec 3 **M**—6:10-8:10, NorrisH 51, Stube

★PE 1014 CONDITIONING. 1 degree credit, \$37.

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**—6:10-8:10, StadS 264, Rattigan

Winter Qtr Sec 2 **W**—6:10-8:10, StadS 264, Davis

Spring Qtr Sec 3 **T**—6-8, Sanford Hall, Wu

Sec 4 **Th**—6-8, Frontier Hall, Ainsworth

★PE 1033 FOIL FENCING. 1 degree credit, \$37.

Developing necessary physical and perceptual skills. Includes history, rules, and practical bouting experience. (No prereq. Limited to 28)

Fall Qtr Sec 1 **W**—6:10-8:10, NorrisH 60, Jacobson

★PE 1035 KARATE. 1 degree credit, \$37.

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**—6:10-8:10, StadN 205, Fusaro

Winter Qtr Sec 2 **T**—6:10-8:10, StadN 205, Fusaro

★PE 1036 RACQUETBALL. 1 degree credit, \$37.

Basic fundamentals of skills and shots; rules and game strategy. (No prereq. Limited to 22)

Fall Qtr Sec 1 **Sa**—8:30 a.m.-10:30, StadN 208, Larson

Winter Qtr Sec 2 **Sa**—8:30 a.m.-10:30, StadN 208, Whitney

Spring Qtr Sec 3 **Sa**—8:30 a.m.-10:30, StadN 208, Whitney

★PE 1041 CYCLING. 1 degree credit, \$37.

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. 27-June 1, Gym Classroom, StP Campus, Aarrestad
No late fee through Apr. 19

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

★PE 1044 SELF DEFENSE. 1 degree credit, \$37.

Fundamental skills; development of the basic skills and techniques, values derived from active participation in physical activity. (No prereq. Limited to 45)

Fall Qtr Sec 1 W—7-9, StadN 207, Holm

Winter Qtr Sec 2 W—7-9 StadN 207, Holm

Spring Qtr Sec 3 W—7-9, StadN 207, Holm

★PE 1050 GOLF. 1 degree credit, \$37.

Fundamentals of grip, stance, and swing in addition to etiquette and rules; moderate intensity. (No prereq. Limited to 20)

Spring Qtr Sec 1 M—6:10-7:40, StadS 267

Sec 2 M—7:40-9:10, StadS 267

Sec 3 W—6:10-7:40, StadS 267, Schneider

Sec 4 W—7:40-9:10, StadS 267, Schneider

★PE 1056 NORDIC (CROSS COUNTRY) SKIING. 1 degree credit, \$37.

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. 12-Feb. 16, Gym Classroom, STP Campus, Griffith

★PE 1074 VOLLEYBALL. 1 degree credit, \$37.

Fundamental skills and rules of volleyball; basic team play and strategy. (No prereq. Limited to 26)

Winter Qtr Sec 1 M—5-7, NorrisH 151, Rattigan

★PE 1135 KARATE. 1 degree credit, \$37.

Advanced development of basic skills plus beginning practice of Kumite (basic sparring), and the introduction to first Kata (form). (Prereq 1035 or equivalent. Limited to 40)

Spring Qtr Sec 1 T—6:10-8:10, StadN 205, Fusaro

★PE 1306 ADVANCED LIFESAVING. 1 degree credit, \$37.

Focus on knowledge and skills necessary to save own life or life of another. (Prereq ability to swim 440 yards. Limited to 25)

Spring Qtr Sec 1 W—6:10-8:10, NorrisH 58, Waite

★OPE 5100 TEACHING PHYSICAL EDUCATION FOR THE HANDICAPPED. 3 degree credits, \$141.75.

Introduction to the role of physical education in the education of the handicapped individual emphasizing understanding, principles of organization, administration, curriculum, supervision, and evaluation. **May not be taken S-N by Education students.** (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—6-8 (plus 1 hr arr), CookeH 214, Breihan

★OPE 5101 PHYSICAL EDUCATION ACTIVITIES FOR THE HANDICAPPED. 3 degree credits, \$141.75.

Adaptation of methods, materials, and physical activities to meet the needs of the physically, mentally, or emotionally atypical student applied to specific handicaps in
(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

selected activity areas. **May not be taken S-N by Education students.** (Prereq 5100 or EPsy 5601 or PsyS 5101. 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—6-8 (plus 1 hr arr), CookeH 214, Breihan

★**OPE 5102 PRACTICUM: PHYSICAL EDUCATION FOR THE HANDICAPPED IN AN ADAPTED SETTING.** 1-3 cr (max 3 cr). This offering 3 degree credits, \$141.75.

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.** (Prereq 5100, 5101 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 M—6-8 (plus 1 hr arr), CookeH 214, Breihan

★**OPE 5103 PRACTICUM: PHYSICAL EDUCATION FOR THE HANDICAPPED IN A MAINSTREAMED SETTING.** 1-3 degree credits. This offering 3 degree credits, \$141.75.

Teaching in the public school environment, providing instruction for atypical individuals in a mainstreamed setting; includes seminar for review of current theory and exchange of ideas and problems. **Must be taken S-N.** (Prereq 5100, 5101 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 T—6-8 (plus 1 hr arr), CookeH 215, Breihan

★**OPE 5120 ADVANCED BIOMECHANICS/KINESIOLOGY.** 4 degree credits, \$189.

Principles of mechanics applied to human movement, analysis of motor skills, application to individual projects. **May not be taken S-N by Education students.** (Prereq undergrad kinesiology 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 TTh—6-8, CookeH 215, Stoner

★**OPE 5122 APPLIED PHYSIOLOGY.** 3 degree credits, \$141.75.

Application of concepts in human physiology to exercise physiology, sports training, and physical activities with particular reference to respiratory and cardiovascular systems. **May not be taken S-N by Education students.** (Prereq PubH 3386 or PhsI 3051 or equivalent. 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—6-8, (plus 1 hr arr), CookeH 214, Serfass

★**OPE 5130 MOTOR LEARNING AND HUMAN PERFORMANCE.** 3 degree credits, \$141.75.

Mechanisms of human motor skill learning; emphasis on theories of motor learning and control of movement, motor memory, and individual differences. **May not be taken S-N by Education students.** (Prereq 3113 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—4-6, (plus 1 hr arr), CookeH 214, Plack

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**☉PE 5131 MOTOR DEVELOPMENT.** 3 degree credits, \$141.75.

Development aspects of motor skill acquisition from birth to physical maturity. **Must be taken A-N.** (Prereq 3112 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—4-6 (plus 1 hr arr), CookeH 215, Plack

★**☉PE 5134 PERCEPTUAL-MOTOR DEVELOPMENT IN CHILDHOOD.** 3 degree credits, \$141.75.

The motoric dimension of perception; emphasis on developmental tenets of perception, diagnosis and remediation of perceptual-motor deficiencies and related research. **May not be taken S-N by Education majors.** (Prereq 3113 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—6-8 (plus 1 hr arr), CookeH 214, Plack

★**☉PE 5136 PSYCHOLOGY OF COACHING.** 3 degree credits, \$141.75.

Psychological aspects of coaching at the elementary, secondary, and college levels. **May not be taken S-N by Education majors.** (Prereq 3113 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 Th—4-6 (plus 1 hr arr), CookeH 214, Krotee

★**☉PE 5152 CURRICULUM DEVELOPMENT.** 3 degree credits, \$141.75.

Trends, issues, and problems at selected levels of interest: elementary, secondary, junior college; for experienced teachers. **May not be taken S-N by Education majors.** (Prereq 5151 or equivalent. 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 (plus 1 hr arr), CookeH 214, Young

★**☉PE 5161 PRACTICUM: CONSTRUCTION OF MOTOR PERFORMANCE TESTS.** 3-6 degree credits, \$47.25 per credit.

Practical experience in the development and/or revision of motor performance tests from preschool through college with emphasis on test design and evaluation of the instrument. (Prereq 5160 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—6-8 (plus 1 hr arr), CookeH 214, Shick

★**☉PE 5387 DETECTION AND PREVENTION OF CORONARY HEART DISEASE.** 4 degree credits, \$PubH 5387, \$189.

Introduction to causes, detection, and prevention of major cardiovascular diseases emphasizing risk factor identification and modification, role of exercise in prevention, and measurement and interpretation of exercise electrocardiograms. **May not be taken S-N by Education majors.** (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 MW—4:15-6, CookeH 214, Serfass, Alexander

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**PE 5985 APPLICATION OF RESEARCH.** 3 degree credits, \$141.75.

Professional research for the practitioner; focus on interrelationships of the purpose, methods, findings, conclusions, and implications. **May not be taken S-N by Education majors.** (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—6-8 (plus 1 hr arr), CookeH 214, Shick

For information on noncredit conferences and workshops in physical education, please contact the Department of Conferences and Institutes, 131 Nolte Center for Continuing Education; telephone 373-3151.

A health examination is required of all boys and girls taking swimming classes. Each child must bring a letter from his or her physician to the first class meeting stating approval of the activity in which he or she is registered.

★**PE 0001 SWIMMING FOR CHILDREN.** No credit, \$37 plus \$3 course fee and \$10 special fee. Total \$50.

A course in swimming for children between the ages of 6 and 14 years. Each child must furnish his (her) own towel and swimming suit; (also a cap). Sections are classified as follows: **Beginners**—non-swimmers; **Advanced Beginners**—those who can swim 25 yards of two or more strokes. (The first meeting will be used for the purpose of reclassifying swimmers where necessary. Each section limited to 20)

Spring Qtr Sec 1 **BEGINNERS** Sa—8:30 a.m.-9:15,
NorrisH 51, Lampe

Sec 2 **ADVANCED** Sa—9:15 a.m.-10,
BEGINNERS NorrisH 51, Lampe

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 courses see page 164 or call 373-2268.

Physical Medicine and Rehabilitation (PMed)

Medical School

Textbooks for most PMed courses are available at the Health Sciences Bookstore (376-4007)

(See also Anatomy; Physiology; and General College courses)

A. Joy Huss, Associate Professor of Occupational Therapy

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★PMed 5182 **FUNCTIONAL NEUROANATOMY AND NEUROPHYSIOLOGY.** 3 degree credits. Tentatively scheduled for 1985-86.

See also Television Course, PMed 5445, **Social and Psychological Aspects of Physical Disability**, page 551.

Physics (Phys)

Institute of Technology

Textbooks for most Phys courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

John Broadhurst, Professor of Physics

Robert Cassola, Lecturer in Physics

Hans W. J. Courant, Professor of Physics

Patricia Heller, Lecturer in Physics

See also Television Course, Phys 1003, **The Changing Physical World**, page 551.

Phys 1041-1042 (replaces 1032-1031) INTRODUCTORY PHYSICS. 4 degree credits each semester, \$148 each semester. (♦\$74) (IS)

Demonstration lectures, problem sessions on topics in physics. Primarily for students interested in those topics useful in various technical areas, but also for CLA distribution requirements. Topics include mechanics, fluids and gases, heat, waves, electricity and magnetism, light, optical instruments, atoms and spectra, nuclei, radioactivity. **Students who have completed Phys 1031 should take Phys 1041 to complete this series.** (Prereq HS algebra and plane geometry for 1041; 1041 for 1042)

Fall Sem 1041 Sec 1 T—6:10-8:40, Phys 133, Broadhurst

Spring Sem 1042 Sec 2 T—6:10-8:40, Phys 133, Broadhurst

Phys 1045-1046 INTRODUCTORY PHYSICS LABORATORY. 1 degree credit each semester, \$37 plus \$5 special fee. Total \$42 each semester. (IS)

Laboratory experiments offered in conjunction with 1041-1042. Laboratories meet for 2 hours Thursday evenings or Saturday mornings for a total of 8 meetings. Sections will be assigned at the first class meeting of 1041 for fall semester and in late March for 1042 spring semester. **Must be taken S-N.** (Prereq 1041 or ¶1041 for 1045 . . . 1042 or ¶1042 for 1046)

Fall Sem 1045 Sec 1 Arr.

Spring Sem 1046 Sec 2 Arr.

Phys 1271 GENERAL PHYSICS. 4 degree credits, \$148. (♦\$74) (IS)

Calculus-level general physics course. Mechanics. (Prereq Math 1221 or ¶1221 or Math 1521 or ¶1521 or Math 1621 or ¶1621 or equivalent; may be taken with or without Phys 1275 lab)

Fall Sem Sec 1 T—6:10-9:10, Phys 170, Courant

Phys 1275 GENERAL PHYSICS LABORATORY. 1 degree credit, \$37 plus \$5 special fee. Total \$42.

Laboratory exercises in mechanics. **This course offered S-N only.** (Prereq 1271 or ¶1271)

Fall Sem Sec 1 Lab meets for 2 hours Th evening or Sa morning for total of 8 mtgs. Sections will be assigned at the first class meeting of 1271.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Phys 1281 GENERAL PHYSICS. 4 degree credits, \$148. (◆\$74) (IS)

Calculus level general physics course. Heat, electricity. (Prereq 1271 and Math 1231 or ¶1231 or Math 1531 or ¶1531 or Math 1621 or ¶1621 or equivalent; may be taken with or without Phys 1285 lab)

Spring Sem Sec 1 T—6:10-9:10, Phys 170, Cassola

Phys 1285 GENERAL PHYSICS LABORATORY. 1 degree credit, \$37 plus \$5 special fee. Total \$42.

Laboratory exercises in heat, electricity. **This course offered S-N only.** (Prereq 1281 or ¶1281)

Spring Sem Sec 1 Lab meets for 2 hours Th evening or Sa morning for total of 8 mtgs. Sections will be assigned at a class meeting of 1281 in late March.

Phys 1291 GENERAL PHYSICS. 4 degree credits, \$148. (◆\$74) (IS)

Calculus-level general physics course. Magnetism, optics. (Prereq 1281; may be taken with or without Phys 1295 lab)

Fall Sem Sec 1 T—6:10-9:10, Phys 166, Cassola

Phys 1295 GENERAL PHYSICS LABORATORY. 1 degree credit, \$37 plus \$5 special fee. Total \$42.

Laboratory exercises in magnetism and optics. **This course offered S-N only.** (Prereq 1291 or ¶1291)

Fall Sem Sec 1 Lab meets for 2 hours on Th evening or Sa morning for total of 8 mtgs. Sections will be assigned at the first class meeting of 1291.

Phys 3501 MODERN PHYSICS. 4 degree credits, \$3511-3512-3513, \$186.

Descriptive course in modern physics; quantum mechanics, hydrogen atom, multielectron atoms, molecular structure, quantum statistics, thermal radiation, solid state physics, nuclear physics. (Prereq 1291 or 1106)

Spring Sem Sec 1 T—6:10-8:40, Phys 166

Phys 5930 PHYSICS FOR HIGH SCHOOL TEACHERS: CURRENT TOPICS. 3 degree credits, \$139.50.

The study of five research areas of current interest in physics. For each area, students will be given background, hear an expert describe his or her research, discuss the material among themselves, prepare a lesson plan, and have a follow-up discussion with the expert. (Prereq general physics, #. May be repeated for credit [no credit for physics grad students or grad minors in physics]. Qualified students may register for graduate credit at the University of Minnesota)

new

Winter Qtr Sec 1 Th—4:15-7, Phys 131

Phys 5940 PHYSICS FOR HIGH SCHOOL TEACHERS: EXPERIMENTAL FOUNDATIONS. 3 degree credits, \$139.50.

An in-depth examination of a conceptual theme in physics and its experimental foundations. 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. (Prereq general physics, #. May be repeated for credit [no credit for physics grad students or grad minors in physics]. Qualified students may register for graduate credit at the University of Minnesota)

new

Spring Qtr Sec 1 Th—4:15-7, Phys 131

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Physiology (Phsl)

Medical School

Textbooks for most Phsl courses are available at the Health Sciences Bookstore (376-4007)

Gordon Kepner, Assistant Professor of Physiology

★**Phsl 1002 HUMAN PHYSIOLOGY.** 4 degree credits, \$148.

Introductory survey for allied health sciences. Not offered if enrollment is below 20. (Prereq 1 qtr biology, 1 qtr chemistry, or #. Limited to 35)

Fall Qtr Sec 1 **W**—6-9:15, MoosT 3-110

★**Phsl 5094-5095 HUMAN PHYSIOLOGY.** 4 degree credits each quarter, \$248 each quarter.

Survey from a regulatory and control system point of view, with some attention to pathophysiology and regulatory imbalances in disease. (Prereq biochemistry, human or mammalian anatomy for 5094; 5094 for 5095. Primarily for medical-surgical and public health nurses. Students interested in graduate credit should inquire at time of registration. Limited to 35)

Fall Qtr 5094 Sec 1 **W**—6:10-9:10, MlrDH 5-276

Winter Qtr 5095 Sec 2 **W**—6:10-9:10, MlrDH 5-276

Plant Pathology (PIPa)

College of Agriculture

Textbooks for most PIPa courses are available at Books Underground on the St. Paul campus (373-0800)

(See also Agriculture, Botany, Horticulture, and Informal Courses)

David H. MacDonald, Professor of Plant Pathology

★**PIPa 1000 AN INTRODUCTION TO PLANT PATHOLOGY.** 2 degree credits, \$74.

An introduction to the characteristics of some of the more common diseases affecting annual and perennial ornamentals, foliage plants, fruits and vegetables; the pathogens that cause those diseases and their control. (No prereq. Limited to 25)

Winter Qtr Sec 1 **M**—6:20-9:20, StakH 103, 105, StP Campus, MacDonald

★**PIPa 3001 INTRODUCTORY PLANT PATHOLOGY: LECTURE, LABORATORY, AND INTRODUCTION TO DIAGNOSIS.** 6 degree credits, \$5002, \$291.

The characteristics of various pathogens and abiotic causes of plant disease. The study of representative plant diseases that illustrate the various principles applicable to the discipline. An introduction to and application of useful laboratory procedures and diagnostic techniques. Utilization of various principles and techniques through solution of "disease situations." (Prereq sophomore, 9 cr plant sciences. Meets concurrently with PIPa 5002. Limited to 15)

Spring Qtr Sec 1 **MTh**—6:20-9:20, StakH 103, 105, StP Campus, MacDonald

★**PIPa 5002 INTRODUCTORY PLANT PATHOLOGY FOR ADVANCED STUDENTS.** 5 degree credits, \$3001, \$242.50.

See course description for PIPa 3001. (Prereq 14 cr plant sciences or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3001. Limited to 10)

Spring Qtr Sec 1 **MTh**—6:20-9:20, StakH 103, 105, StP Campus, MacDonald

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Polish

(See Russian and East European Studies)

Political Science (Pol)

College of Liberal Arts

Textbooks for most Pol courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450)

(See also noncredit Informal Courses; and Public Affairs)

Charles H. Backstrom, Professor of Political Science
 Terence W. Ball, Professor of Political Science
 Mary C. Dietz, Assistant Professor of Political Science
 Raymond Duvall, Associate Professor of Political Science
 Edwin Fogelman, Professor of Political Science
 Robert Kvavik, Associate Professor of Political Science
 August H. Nimtz, Jr., Associate Professor of Political Science
 Martin W. Sampson, III, Associate Professor of Political Science
 L. Earl Shaw, Jr., Associate Professor of Political Science
 W. Phillips Shively, Professor of Political Science
 Dennis Simon, Assistant Professor of Political Science
 John E. Turner, Regents' Professor of Political Science
 Charles Walcott, Associate Professor of Political Science

All graduate students can use only 8001 through 8998 level seminars to satisfy major requirements; they should take lower level political science courses only to correct deficiencies in background when directed to do so by advisers.

A MAJOR IN POLITICAL SCIENCE CAN BE COMPLETED IN THE EVENING.

Those courses required in the major are offered every 2 years. Interested students should discuss plans with an Extension counselor (373-3905).

BA Major Sequence (effective Fall, 1982)

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/N 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, 373-2651, for information.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

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 376-3000 two weeks before mail registration for that quarter begins.

General Education

Pol 1001 AMERICAN GOVERNMENT AND POLITICS. 5 degree credits, \$185. (◆\$92.50)
(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 **T**—6:30-9:45, FraserH 102, Walcott

Winter Qtr Sec 2 **W**—6:30-9:45, AndH 270, Kvavik

Spring Qtr Sec 3 **M**—6:30-9:45, AndH 270, Nimtzt

Pol 1025 WORLD POLITICS. 4 degree credits, \$148. (◆\$74)

Contemporary international relations; forms of state interaction; problems of conflict and cooperation. (No prereq)

Fall Qtr Sec 1 **T**—6:20-8:50, BlegH 130, Duvall

Pol 1026 AMERICAN FOREIGN POLICY. 4 degree credits, \$148. (◆\$74)

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)

Winter Qtr Sec 1 **M**—6:20-8:50, AndH 230, Sampson

Pol 1041 CONTEMPORARY POLITICAL IDEOLOGIES. 4 degree credits, \$148. (◆\$74)

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 **Th**—6:20-8:50, BlegH 350, Fogelman

Pol 1061 INTRODUCTION TO POLITICAL THOUGHT. 4 degree credits, \$148. (◆\$74)

Critical examination of major concepts, ideas, and arguments concerning such topics as liberty, justice, obligation, consent, authority, violence. (No prereq)

Spring Qtr Sec 1 **T**—6:20-8:50, BlegH 210, Dietz

Pol 3051 (formerly 1051) INTRODUCTION TO POLITICAL ANALYSIS. 5 degree credits,
§1051, \$192.50 (◆\$96.25)

Formation of political communities, political participation, policymaking, compliance, legitimacy, political development, types of political systems. Empirical and normative problems. Comparisons among major countries. (No prereq)

Spring Qtr Sec 1 **Th**—6:30-9:45, BlegH 245, Shively

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

American governmental systems and processes

Pol 3306 THE AMERICAN PRESIDENCY. 4 degree credits, \$154. (◆\$77)

The office and individual Presidents; organizational characteristics of the Executive Office and individual qualities of decision making; relationships with Congress, the bureaucracy, parties, interest groups, media and public opinion. (Prereq 1001 or equivalent or #)

Fall Qtr Sec 1 **W**—6:20-8:50, Law 1, Simon

(See also CEW 0501, Economic Policy in a Presidential Campaign Season)

Pol 3308 THE UNITED STATES CONGRESS. 4 degree credits, \$154. (IS)

Internal organization, committee system, party leadership, norms, recruitment; legislative policy making; relationship with the President and bureaucracy; interest groups, political party, and constituency influences on the congressional process. (Prereq 1001 or equivalent or #)

Spring Qtr Sec 1 **T**—6:20-8:50, Mgmt/Econ 130, Shaw

Pol 3331 MINNESOTA GOVERNMENT AND POLITICS. 4 degree credits, \$154.

The Minnesota political system; demographic and cultural setting, political and governmental processes, contemporary policies. (No prereq; 1001 recommended. A joint Day/Extension class)

Winter Qtr Sec 1 **T**—6:20-8:50, BlegH 210, Backstrom

Comparative government and politics

Pol 5463 (formerly 5444) GOVERNMENT AND POLITICS OF SCANDINAVIAN COUNTRIES. 4 degree credits, \$154.

Scandinavian political institutions and behavior; Scandinavian party politics, interest groups, and legislative behavior. Voting patterns and voter alignments. Emergence of social democratic state. (Prereq 3051 or non-political science grad student or #. May be applied toward the CLA second language requirement, Route II, for Danish, Finnish, Norwegian, and Swedish [see page 562]. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **W**—6:20-8:50, BlegH 135, Kvavik

Pol 5471 (formerly 5443) GOVERNMENT AND POLITICS OF THE SOVIET UNION. 4 degree credits, \$154. (◆\$77)

The rise of Bolshevism; sources and nature of Bolshevik ideology, history and institutional character of the Soviet regime; sources of power; role of the party and functional groups; patterns of change. (Prereq 3051 or non-political science grad student or #. May be applied toward the CLA second language requirement, Route II, for Russian [see page 562]. Not offered for graduate credit)

Spring Qtr Sec 1 **M**—6:20-8:50, BlegH 245, Turner

Pol 5478 (formerly 5448) GOVERNMENT AND POLITICS OF AFRICAN COUNTRIES. 4 degree credits, \$154. (IS)

Political institutions and behavior in sub-Saharan African countries in their social and cultural settings; class and tribal structure; parties and elections; source and nature of

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

ideologies; economic and social policies. (Prereq 3051 or non-political science grad student or #. May be applied toward the CLA second language requirement, Route II, for Swahili [see page 562]. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 Th—6:20-8:50, BlegH 420, Nimtzt

Political theory

Pol 3659 AMERICAN POLITICAL THOUGHT. 4 degree credits, \$154. (♦\$77)

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)

Spring Qtr Sec 1 W—6:20-8:50, Law 1, Ball

Politics and behavior

Pol 5738 AMERICAN POLITICAL CAMPAIGNS AND ELECTIONS. 4 degree credits, \$154. (♦\$77)

National, state, and local campaigns and elections; research in local political parties and campaigns. (Prereq 1001 or equivalent or #. 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, BlegH 135, Backstrom

Portuguese

(See Spanish and Portuguese)

Port 1001-1002-1003 not offered 1984-85.

Professional Improvement Courses

See the *Noncredit Courses* section of this Bulletin.

Psychoeducational Studies (PsyS)

College of Education

(See Educational Psychology)

Psychological Foundations (PsyF)

College of Education

(See Educational Psychology)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Psychology (Psy)

College of Liberal Arts

Textbooks for most Psy courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

(See also Child Psychology; General College; Informal Courses; and Women's Studies)

Eugene Borgida, Associate Professor of Psychology
Steven D. Brown, Assistant Professor of Psychology
N. James Butcher, Professor of Psychology
René V. Dawis, Professor of Psychology
Richard A. Depue, Professor of Psychology
Steven D. Hollon, Associate Professor of Psychology
Robert L. Jones, Professor of Journalism and Psychology
Mary Ann Mattoon, Clinical Associate Professor
Mary J. Meadow, Instructor in Psychology
Gail B. Peterson, Associate Professor of Psychology
Roy W. Pickens, Professor of Psychiatry and Psychology
Vera M. Schletzer, Professor of Psychology
Auke Tellegen, Professor of Psychology

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 Extension counselor (373-3905).

B.A. Major Sequence

Required Preparatory Courses

1001, 1004-1005**

**Should be taken as soon as possible after completion of 1001.

Major Requirements:

2 courses chosen from 3011, 3031, 3051, 3061, 5011, 5012-5013, 5014, 5015, 5017, 5018, 5019, 5031, 5045, 5054, 5061, 5062, 5071

2 courses chosen from 3101, 3124, 3201, 3604, 3607, 3617, 5141, 5202, 5501, 5701, 5702, 5703, CPsy 3303 or 5303

3801**

**Should be taken as soon as possible after completion of 1001.

4 required elective 3000-5000-level psychology courses. (A total of 2 options from Psy 3960 and Psy 3970 may be used as required electives.)

1 or more optional elective 3000-5000-level Psychology or Child Psychology courses or Psychological Foundations or Counseling and Student Personnel Psychology courses. Students choosing electives in PsyF or CSPP must contact an adviser in the Psychology Department (373-5658) before registering.

Psychology courses at the 3000-5000-level must total at least nine, with a minimum total of 32 credits (CPsy 5303 may be included).

Psychology majors, especially those considering graduate work, are urged to elect courses in mathematics and in the natural, social, and physical sciences. Prospective graduate students should take further work in statistics and computer programming. Students not planning graduate work in psychology may, with adviser assistance, design programs that prepare for such paraprofessional services as interviewing, personnel work, mental health work, counseling, and research technician work.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Those interested in child psychology are encouraged to elect courses offered through the Institute of Child Development. They may consider majors in that area—double majors in psychology and child psychology are not permissible. Psychology majors are restricted in the number of child psychology courses acceptable for the major.

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

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 376-3000 two weeks before mail registration for that quarter begins.

Psy 1001 GENERAL PSYCHOLOGY. 5 degree credits, \$185. (♦\$92.50) (IS)

Introduction to study of human behavior. Prerequisite for all advanced courses in psychology. (No prereq)

Fall Qtr Sec 1 **TTh**—6:20-8:15, FolH 308

Sec 2 **MW**—6:20-8:15, Phys 133

Fall Sem Sec 3 **M**—6:20-8:50, FolH 308

Sec 4 **T**—6:20-8:50, MoosT 2-690, Pickens

★Sec 5 **W**—7-9:30, Irondale HS 312, New Brighton (Limit 30)

★Sec 6 **Th**—6:20-8:50, Robbinsdale/Armstrong HS C-255, Plymouth (Limit 30)

★Sec 7 **Th**—7-9:30, Richfield HS 144 (Limit 30)

Winter Qtr Sec 8 **MW**—6:20-8:15, FordH 55

Sec 9 **W**—9 a.m.-11:30, MacP

Offered through Continuing Education for Women

Spring Sem Sec 10 **T**—6:20-8:50, MoosT 2-690

Spring Qtr Sec 11 **MW**—6:20-8:15, AndH 150

Sec 12 **TTh**—6:20-8:15, FolH 308

Sec 13 **TTh**—6:30-8:25, Minnetonka HS 116

Psy 1001 is also offered as a Radio Course. See page 551.

Psy 1003 APPLICATION OF PSYCHOLOGY TO LIVING. 4 degree credits, \$148. (♦\$74)

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, NichH 209, Brown

★Sec 2 **W**—7-9:30, Minnetonka HS 119 (Limit 30)

Winter Qtr Sec 3 **M**—6:20-8:50, EltH N119

Sec 4 **T**—6:20-8:50, WullH 230

★Sec 5 **Th**—7-9:30, Ramsey HS 253, Roseville (Limit 30)

Spring Qtr Sec 6 **M**—6:20-8:50, NichH 209

★Sec 7 **W**—6:30-9, Richfield HS 142 (Limit 35)

(See also GC 1282, Psychology Applied to Human Affairs)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**Psy 1004-1005+** **INTRODUCTORY LABORATORY PSYCHOLOGY.** 4 degree credits each quarter, \$148 each quarter.

Experiments illustrating contemporary subject matter such as human and animal learning, problem solving, visual perception, measurement of general and special abilities and personality traits. (Prereq 1001 or ¶1001 for 1004; 1004 for 1005. Limited to 24)

Fall Qtr 1004 Sec 1 **M**—6:20-9:50, EltH 50-60

1004 Sec 2 **T**—6:20-9:50, EltH 50-60

Winter Qtr 1004 Sec 3 **T**—6:20-9:50, EltH 50-60

1005 Sec 4 **Th**—6:20-9:50, EltH 50-60

Spring Qtr 1005 Sec 5 **M**—6:20-9:50, EltH 50-60

Psy 3011 INTRODUCTION TO THE PSYCHOLOGY OF LEARNING. 4 degree credits, \$154. (◆\$77)

Survey of the basic methods in the study of learning. Development of fundamental concepts and principles governing the learning process. (Prereq 1001)

Fall Qtr Sec 1 **M**—6:20-8:50, FolH 50, G Peterson

Spring Qtr Sec 2 **M**—6:20-8:50, FolH 50, G Peterson

★**Psy 3031 SENSATION AND PERCEPTION.** 4 degree credits, \$154. (◆\$77)

Psychological, biological, and physical aspects of sensory experience in humans and animals. Emphasis on vision and hearing. (Prereq 1001, 1004 or #. Limited to 40)

Winter Qtr Sec 1 **T**—6:20-8:50, BuH 123

Psy 3051 INTRODUCTION TO COGNITIVE PSYCHOLOGY. 4 degree credits, \$154.

Research problems and theoretical concepts in study of cognitive factors in perception, memory, and concept formation. (Prereq 1001, 1005 or ¶1005)

Fall Qtr Sec 1 **T**—6:20-8:50, NichH 216

Psy 3061 INTRODUCTION TO PHYSIOLOGICAL PSYCHOLOGY. 4 degree credits, \$5061, \$154. (◆\$77)

Survey of neural mechanisms of motivation, emotion, sleep-wakefulness cycle, learning, and communication in animals and humans. (Prereq 1005 or Biol 1011 or #)

Winter Qtr Sec 1 **Th**—6:20-8:50, BuH 123

Psy 3101 INTRODUCTION TO PERSONALITY. 4 degree credits, \$5101, \$154. (◆\$77) (IS)

An overview of the field of personality, with discussions of personality theory (e.g. the theories of Freud, Jung and Adler), of selected topics of empirical research in the field of personality, and of personality assessment. (Prereq 1001)

Fall Qtr Sec 1 **T**—6:20-8:50, ApH 150

Spring Qtr Sec 2 **T**—6:20-8:50, NichH 207, Tellegen

Psy 3124 PSYCHOLOGY OF INDIVIDUAL DIFFERENCES. 4 degree credits, \$154. (◆\$77)

Differential method in study of human behavior. Impact and importance of individual differences in modern society; instruments of measurement and behavior prediction in differential psychology; major determinants of individuality. (Prereq 3801)

Winter Qtr Sec 1 **T**—6:20-8:50, EltH N119, Dawis

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

- Psy 3201 INTRODUCTION TO SOCIAL PSYCHOLOGY.** 4 degree credits, \$154. (◆\$77)
 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, ChDev 216
- Psy 3206 APPLIED SOCIAL PSYCHOLOGY.** 4 degree credits, \$154. (◆\$77)
 Overview of field. Applications of social psychological theories to such areas as jury selection, media, behavioral medicine, desegregation, advertising, victimology, juvenile delinquency, and energy conservation programs. (Prereq 1001 and 3201)
Spring Qtr Sec 1 **M**—6:20-8:50, ChDev 218
- Psy 3604 INTRODUCTION TO ABNORMAL PSYCHOLOGY.** 4 degree credits, \$5604, \$154. (◆\$77) (IS)
 The field of abnormal psychology. Etiologies of behavior disorders; discussion of available treatments. (Prereq 1001)
Fall Qtr Sec 1 **T**—6:30-9, Ramsey HS, Roseville
 Sec 2 **W**—6:20-8:50, Phys 131, Hollon
Winter Qtr Sec 3 **W**—6:20-8:50, ApH 150, Depue
Spring Qtr Sec 4 **M**—6:20-8:50, FolH 308
 Sec 5 **W**—6:20-8:50, WullH 230, Butcher
- Psy 3607 SURVEY OF CLINICAL INTERVENTION METHODS.** 4 degree credits, \$154. (◆\$77)
 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, BuH 125, Hollon
- Psy 3617 INTRODUCTION TO CLINICAL PSYCHOLOGY.** 4 degree credits, \$154. (◆\$77)
 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. (Prereq 3604 or 5604, 3801)
Fall Qtr Sec 1 **W**—6:20-8:50, EltH N119
- Psy 3801 INTRODUCTION TO MEASUREMENT AND STATISTICAL METHODS.** 4 degree credits, \$154.
 Quantification in research problems in psychology. Descriptive and inferential statistics, hypothesis testing, nonparametric statistics. Examples from various areas of psychology. (Prereq 1001 or equiv)
Fall Qtr Sec 1 **Th**—6:20-8:50, AndH 270
Winter Qtr Sec 2 **Th**—6:20-8:50, AndH 250
Spring Qtr Sec 3 **T**—6:20-8:50, EltH N119
- Psy 3911 PERSONALITY AND RELIGION.** 4 degree credits, \$154. (◆\$77) (IS)
 Topical approach to the study of religious behavior. Areas covered include guilt, alienation, transcendence, altered states of consciousness, impulse control, conscience, values and beliefs, symbolic behavior, self-actualization, psychopathology, and the psychological interpretation of religious scriptures. (Prereq 1001 or #)
Spring Qtr Sec 1 **M**—6:20-8:50, EltH N119, Meadow

(See also Religious Studies)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**Psy 5105 THE ANALYTICAL PSYCHOLOGY OF C.G. JUNG.** 4 degree credits, \$154.
(◆\$77)

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. Meets concurrently with SW 5010. Limited to a combined total of 109)

Winter Qtr Sec 1 **W**—6:20-8:50, NichH 213, Mattoon

Psy 5141 PSYCHOLOGY OF WOMEN. 4 degree credits, \$154. (◆\$77)

Psychological and physical sex differences, stressing developmental and environmental influences on dependency, aggression, achievement motivation, and achievement. Sex roles and sexuality during various life phases. (Prereq 1001. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **M**—6:20-8:50, EltH N119, Schletzer

Spring Qtr Sec 2 **W**—9 a.m.-11:30, MacP, Schletzer

Offered through Continuing Education for Women

CEW

(See also Women's Studies)

Psy 5202 ATTITUDES AND SOCIAL BEHAVIOR. 4 degree credits, \$154. (◆\$77)

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 1001, 3201 or #. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **W**—6:20-8:50, EltH N119, Borgida

Psy 5501 VOCATIONAL PSYCHOLOGY. 4 degree credits, \$154. (◆\$77)

Individual differences analysis of the work personality and the work environment; vocational development and vocational choice; work adjustment; work motivation and performance; work satisfaction and satisfactoriness; psychological problems connected with work. (Prereq 3801 or equivalent. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **T**—6:20-8:50, FolH 102, Dawis

See also Television Course, **Psy 5604, Understanding Behavior Disorders**, page 551.

Psy 5701 PERSONNEL AND INDUSTRIAL PSYCHOLOGY. 4 degree credits. \$154.
(◆\$77)

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 1001, one course in statistics 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)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Psy 5703 PSYCHOLOGY OF ORGANIZATIONAL TRAINING AND DEVELOPMENT. 4 degree credits, \$154. (♦\$77)

Theories, methods, and research findings regarding improving the performance of individuals, groups, and organizations; individual training and development; group work methods and problem solving strategies; methods of organizational development. (Prereq 8 cr in psychology or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **Th**—6:20-8:50, EltH N119

Psy 5751 PSYCHOLOGY OF ADVERTISING. 4 degree credits, \$Jour 5251, \$154. (IS)

Psychological principles, research techniques, and applications in advertising and selling. Consumer attitudes and behavior. Psychological mechanisms upon which effectiveness of advertisements and commercials depends. (Prereq 1001. Qualified students may register for graduate credit at the University of Minnesota. **Journalism majors and minors should register for Jour 5251 and see special information given with that course.** Meets concurrently with Jour 5251)

Fall Qtr Sec 1 **Th**—6:20-8:50, MurH 308, Jones

Spring Qtr Sec 2 **Th**—6:20-8:50, MurH 311, Jones

For information on noncredit workshops or conferences in psychology, please contact the Department of Conferences, Registrar, Nolte Center for Continuing Education; telephone 373-3151.

Psychology in the Schools Training Program

(See Educational Psychology for course work)

Public Affairs (PA)

Humphrey Institute of Public Affairs

Textbooks for most PA courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450)

(See also noncredit Informal Courses)

Calvin Bradford, Assistant Professor of Public Affairs

John Bryson, Assistant Professor of Planning

Robert Einsweiler, Professor of Planning

Barton Galle, Assistant Professor of Pharmacy

Luther Gerlach, Professor of Anthropology

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Public Affairs. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

OPA 5117 ENERGY, RESOURCE USE, AND SYSTEM CHANGE. 4 degree credits, \$154.

Social-cultural system factors in development, production, control, distribution, and use of energy, water, key resources, and food in the United States and other societies. Social-cultural evolution, interaction among different societies; growth, no-growth issues, emerging global interdependence. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

new

Spring Qtr Sec 1 T—6:20-9:30, FordH 120, Gerlach

★OPA 5141 ENERGY POLICY I: SUPPLY AND DEMAND OPTIONS. 4 degree credits, \$154.

Possible energy supply systems and ways in which energy is consumed; relatively nontechnical description of physical systems, environmental and social impacts, regulatory frameworks, resource base, and relationship to energy policy options. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 8 Extension students)

Winter Qtr Sec 1 W—6:20-8:50, Law 3

★OPA 5506 TOPICS IN ECONOMIC DEVELOPMENT. 4 degree credits, \$154.

Advanced analysis of selected topics. An understanding of the internal economics of neighborhoods and communities and a detailed presentation of the financial analysis of real estate development and enterprise development are merged to allow participants to work with public and private reinvestment and economic development programs. Emphasis is on the role of credit and capital in housing and economic development activities, on applied rather than theoretical skills. (No prereq. 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 Th—6:20-8:50, Law 3, Bradford

OPA 5514 GROUP TECHNIQUES IN PUBLIC AFFAIRS AND PLANNING. 4 degree credits, \$154.

The nature, role, uses, and limitations of group techniques in public affairs and planning; some specific group techniques. Focus is inter-organization. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

new

Spring Qtr Sec 1 T—7-9, Law 3, Bryson

★OPA 5521 STRATEGIES AND TACTICS IN PROJECT PLANNING. 4 degree credits, \$154.

How goals and contextual factors affect project planning; appropriate strategic and tactical choices to make during the planning process; case examples of planning for public programs, projects, products, or services. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 8 Extension students)

Winter Qtr Sec 1 T—7-9, BlegH 350, Bryson

OPA 5525 ORGANIZATIONAL DESIGN AND CHANGE. 4 degree credits, \$154.

Principles and politics of organization and inter-organizational design and change. A variety of perspectives are presented (e.g. those from organizational theory and management, sociology, political science, economics). Special attention to public sector applications and case examples. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

new

Winter Qtr Sec 1 Th—7-9, Law 3, Bryson

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

OPA 5530 STRATEGIC PLANNING. 4 degree credits, \$154.

new

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 #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **TTh**—7-9:30, BlegH 435, Bryson, Einsweiler

OPA 5540 DEVELOPMENT MANAGEMENT SYSTEMS. 3 degree credits, \$115.50.

new

Integrated systems of controls and incentives to manage land development at state, metropolitan, and local governmental levels. Includes traditional planning and land use devices, tax and fee techniques, environmental regulations, and innovative controls. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **W**—7-9:30, SocSci 307

★OPA 5561 CASE STUDIES IN PLANNING AND PLAN MAKING. 3 degree credits, \$115.50.

Planning strategies, plan format and content, and plan preparation; how these change with time and context. Relation to public attitudes and issues; to work with elected officials, citizens, private sector, and implementing agencies; and to planning agency capabilities. State, regional, and local examples. (No prereq. 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 **W**—7-9:30, Law 3, Einsweiler

★OPA 5660 MULTIDISCIPLINARY PERSPECTIVES ON AGING. 4 degree credits, \$Educ 5440, CPsy 5305, HSU 5009, SW 5024, Soc 5960, \$154.

See course description for Soc 5960. Further information is available by calling the All-University Council on Aging at (612) 376-1759. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Educ 5440, HSU 5009, Phar 5009, SW 5024, Soc 5960. A joint Day/Extension class limited to 8 Extension students)

Fall Qtr Sec 1 **MW**—4:15-6, MoosT 2-620, Galle

PA 5660 is also offered as a Television Course. See page 551.

Public Health (PubH)

School of Public Health

Textbooks for most PubH courses are available at the Health Sciences Bookstore (376-4007)

Robert K. Anderson, Professor and Director, Veterinary Public Health

Mila Aroskar, Associate Professor, Public Health Nursing

Michael Baizerman, Professor, Maternal and Child Health

Janet Berkseth, Assistant Professor, Public Health Nursing

Colleen Berney, Clinical Instructor, Maternal and Child Health

Robert Blum, Associate Professor, Maternal and Child Health, and Director, Adolescent Health Program

Miriam Cohn, Professor, School of Social Work

Phyllis Fleming, Assistant Professor, Public Health Nutrition

Judith Garrard, Associate Professor, Health Psychology

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

*George Kenneth Gordon, Associate Professor, Hospital and Health Care Administration
Paul Gunderson, Lecturer; Director, Minnesota Center for Health Statistics, Minnesota
Department of Health*

Richard O. Heilman, Clinical Assistant Professor, Psychiatry and Public Health

John Hung, Assistant Professor, Health Psychology

James Kincannon, Associate Professor, Health Education

*Noel Larson, Psychotherapist, Meta Resources, St. Paul; Adjunct Instructor, Continuing
Education in Social Work, Clinical Assistant Professor, Health Education*

Betty Lia-Hoagberg, Assistant Professor, Maternal and Child Health

*James W. Maddock, Family Therapist, Meta Resources, St. Paul, Adjunct Associate Professor,
Health Education*

Daniel McInerney, Adjunct Assistant Professor, Public Health Administration

William A. O'Brien, Clinical Professor of Medicine and Adjunct Professor, Public Health

Joseph S. Quigley, Instructor in Veterinary Public Health

*Michael D. Resnick, Assistant Professor, Maternal and Child Health, and Adolescent Health
Program*

Robert W. Schwanke, Associate Professor, Health Education

Stanton Shanedling, Clinical Instructor, Maternal and Child Health

Rexford D. Singer, Associate Professor, Environmental Health

Patricia Splett, Instructor, Public Health Nutrition

Jeffrey B. Stevens, Assistant Professor, Environmental Health

Mary Story, Assistant Professor, Public Health Nutrition

Conrad P. Straub, Professor Emeritus, Environmental Health

Robert ten Bensele, Professor and Director, Maternal and Child Health

William R. Terrell, Adjunct Instructor, Health Education

Robert Veninga, Associate Professor, Health Education

J. Pamela Weiner, Clinical Instructor, Maternal and Child Health

Carolyn Williams, Assistant Professor, Health Psychology and Adolescent Health Program

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Public Health. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

(See Alcohol and Drug Counseling listing with Family Social Science)

Public Health Categories

Environmental Health (begins page 374)

5151 Environmental Health

5159 Seminar: Environmental Health

5241 Environmental Health Aspects of Water Supply

5244 Environmental Health Aspects of Waste Water Systems

5267 Environmental and Occupational Toxicology

Health Education (begins page 371)

3001 Personal and Community Health

3003 Fundamentals of Alcohol and Drug Abuse

5003 Fundamentals of Alcohol and Drug Abuse

5013 Interdisciplinary Team Training in Health Services Delivery

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

- 5021 Human Sexuality for Health and Helping Professionals I
- 5022 Sexuality for Health and Helping Professionals II
- 5023 Sexuality for Health and Helping Professionals III
- 5059 Interpersonal Behavior in Health Organizations
- 5805 Topics: Program Evaluation in Public Health
- 5807 Cross Cultural Perspectives on Health Behaviors
- 5850 Health Sciences Education in the 20th Century
- 5853 Behavioral Medicine I: Theory, Research and Practice
- 5854 Behavioral Medicine II: Selected Topics

Maternal and Child Health (begins page 376)

- 5610 Principles of Maternal and Child Health
- 5616 Rights of Children and Youth: Abuse and Neglect
- 5622 Women's Health: Issues and Controversies
- 5630 Family Planning Issues in Maternal and Child Health
- 5631 Health Needs and Problems of Adolescent Females
- 5633 Introduction to Research Methods: Understanding Social Behavioral Research in the Health Sciences
- 5634 Health Problems of Youth
- 5635 Introduction to Consultation in Youth Work
- 5636 Accident Prevention: A Public Health Perspective for Program Planning
- 5638 Special Topics: Seminar on Adolescent Child Bearing/Child Rearing
- 5647 Healthy Adolescent Development

Public Health Administration (begins page 378)

- 5710 Topics in Public Health Administration, Regulation, and Health
- 5711 Public Health Law
- 5731 Administrative Aspects of Planning Disease Prevention/Health Promotion Programs
- 5732 Competition in the Delivery of Health Services—A Public Health Perspective

Public Health Nursing (begins page 379)

- 5500 Public Health—Normal Growth and Development
- 5516 Ethical Dimensions of Public Health Nursing Practice

Public Health Nutrition (begins page 379)

- 5904 Factors Affecting Nutrition Behavior
- 5934 Administrative Skill Building for Nutritionists and Dietitians
- 5935 Nutritional Needs and Requirements of Adolescents

Public Health Workshops (begins page 374)

- 5608 Alcohol and the Family: Effects on the Fetus and the Child
- 5625 Working with Adolescents Workshop
- 5640 Child Abuse and Neglect Seminar
- 5643 Sexual Abuse of Children
- 5644 Challenge of Prevention: Health Promotion for Children and Youth

Veterinary Public Health (begins page 380)

- 3301 Perspectives: Interrelationships of People and Animals in Society Today
- 5301 Perspectives: Interrelationships of People and Animals in Society Today

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Health education

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Public Health Education. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

PubH 3001 PERSONAL AND COMMUNITY HEALTH. 3 degree credits, \$3004, \$149.25.

Fundamental principles of health conservation and disease prevention. (No prereq).

Winter Qtr Sec 1 **T**—7-9:30, MoosT 2-530, O'Brien

Spr Qtr ★ Sec 2 **M**—7-9:30, Richfield HS 142, O'Brien (Limit 35)

PubH 3003 FUNDAMENTALS OF ALCOHOL AND DRUG ABUSE. 2 degree credits, \$3004, HSU 3003, 5032, \$99.50. (IS 5033)

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 PubH 5003, HSU 3003)

Spring Qtr Sec 1 **Th**—6:30-8:30, HSUnitF 2-120, 2-130, Kincannon

PubH 5003 FUNDAMENTALS OF ALCOHOL AND DRUG ABUSE. 2 degree credits, \$PubH 3003, HSU 3003, 5032, \$99.50.

See description for PubH 3003. (Prereq sr, post baccalaureate adult special or graduate student. Meets concurrently with 3003, HSU 3003, 5032; different exam requirements)

Spring Qtr Sec 1 **Th**—6:30-8:30, HSUnit F 2-120, 2-130, Kincannon

★**PubH 5013 INTERDISCIPLINARY TEAM TRAINING IN HEALTH SERVICES DELIVERY.** 3 degree credits, \$HSU 5001, 5300, \$SW 5013, \$149.25.

Interdisciplinary team development with application to public health, human service projects, didactic content, experiential methods, activities to develop attitudes, skills essential to effective team goal setting, decision making, problem-solving, and task accomplishment. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HSU 5001, SW 5013. A joint Day/Extension class limited to 12 Extension students from health or helping professions)

Winter Qtr Sec 1 **W**—6:10-9:10, MoosT 2-585, 2-571, Schwanke, Cohn

○**PubH 5021 HUMAN SEXUALITY FOR HEALTH AND HELPING PROFESSIONALS I.** 3 or 4 credits, \$HSU 5025, \$SW 5021, \$149.25 or \$199.

Multidisciplinary approach to human sexuality from the perspective of public and social health and well being of the community, society, and individuals. Develops personal skills for imparting sexual knowledge to other health professions and consumers. For 3 credits, complete regular course grading requirements. For 4 credits, do the above *plus* attend a 13-hour Sexual Attitude Reassessment workshop scheduled Oct. 26, 27. (Prereq enrollment in Health Sciences, or in a graduate program in Public Health, Family Social Science, Social Work, Education, or #.

(continued next page)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with SW 5021, HSU 5025. A joint Day/Extension class for Extension students from health and helping professions and educators)

Fall Qtr Sec 1 **Th**—5:15-7:30, MoosT 2-620, Larson, Terrell

PubH 5022 HUMAN SEXUALITY FOR HEALTH AND HELPING PROFESSIONALS II. 3 degree credits §HSU 5027, §SW 5022, \$149.25.

Examine rationales for sexual health care and methods of intervention into sex-related problems. Focus on methods of assessment, creation of comfortable climate for exploration of sexual concerns, providing sex-related information, techniques for behavior change, and making referrals to specialized resources for treatment. (Prereq 5021 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with SW 5022, HSU 5027. A joint Day/Extension class for Extension students from Health Sciences, Public Health, a graduate program of Family Social Sciences or Education)

Winter Qtr Sec 1 **Th**—5:15-7:30, MoosT 2-530, Maddock, Larson

PubH 5023 HUMAN SEXUALITY FOR HEALTH AND HELPING PROFESSIONALS III. 3 degree credits §HSU 5028, §SW 5023, \$149.25.

Issues of health policy, preventive education in human sexuality. Policy-making process and current controversial sexual issues. Discussion of sexual normalcy, variance/deviance; ethical and legal considerations; public policies on sexual minorities; institutional policies on sexual health care; sex education programs for children and adults. (Prereq 5021 and #. Meets concurrently with SW 5023, HSU 5028. A joint Day/Extension class)

Spring Qtr Sec 1 **Th**—5:15-7:30, MoosT 2-690, Maddock, Terrell

PubH 5056 HEALTH EDUCATIONAL APPROACHES TO CHANGE THROUGH PLANNING. 3 degree credits, \$149.25.

Elements of comprehensive health/health education planning, theory, process, models for educational planning; fact-finding procedures and models; setting behavioral content, and methodological objectives; theories, principles, and procedures for evaluating health services and their educational components. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **W**—5:15-8, MoosT 2-260, Carlaw

PubH 5059 INTERPERSONAL BEHAVIOR IN HEALTH ORGANIZATIONS. 4 degree credits, \$199.

Research and theory from the social sciences applied to organizational problems in hospitals and public health agencies. Organizational behavior and what health professionals can do in improving organizational performance. Leadership behavior, conflict resolution strategies, committee effectiveness, and the management of change. (No prereq. 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, JacH 2-135, Gordon

Spring Qtr Sec 2 **MW**—3:15-5, JacH 2-135, Veninga

PubH 5805 TOPICS: PROGRAM EVALUATION IN PUBLIC HEALTH. 1-4 degree credits, \$49.75 per credit.

Seminar with directed study and/or class project on selected problems and current issues in program evaluation research as applied to programs in public health.

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Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Intended for students in public health as well as graduate and advanced undergraduate students in social, behavioral, and health sciences programs. (Prereq 5852 and #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 Arr., Garrard

PubH 5807 CROSS-CULTURAL PERSPECTIVES ON HEALTH BEHAVIORS. 3 degree credits, \$149.25.

Introduces cross-cultural issues (both international and sub-cultural) that influence the health behaviors of people. Consideration of what constitutes culture and how cross-cultural factors are studied. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 M—3:15-5, HSUnitF 2-120, 2-130, Williams

PubH 5850 HEALTH SCIENCES EDUCATION IN THE 20TH CENTURY. 3 degree credits, \$HSU 5022, \$149.25.

Concentrates on trends and developments during the 20th century in four major areas: (1) educational change and reform, (2) funding of education, (3) professional regulations (licensure and certification) and its impact upon education, and (4) specialization and professionalism and the effects on education. Medical education will be the major paradigm used to examine these issues, and dental and nursing education will also be examined. (No prereq. Meets concurrently with HSU 5022. A joint Day/Extension class. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 W—4:15-6, MoosT 2-571, 2-585 Garrard

PubH 5853 BEHAVIORAL MEDICINE I: THEORY, RESEARCH AND PRACTICE. 3 degree credits, \$149.25.

Survey of the history of and current issues in behavioral medicine and health psychology; emphasis on stress and its managements, life style intervention, preventive public health, psychology of health behavior, self management and health education. (Prereq psychology grad student or professional health-related discipline. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 M—4:30-6:15, PWB 5-224, Hung

Spring Qtr Sec 2 M—4:30-6:15, PWB 5-224, Hung

PubH 5854 BEHAVIORAL MEDICINE II: SELECTED TOPICS. 3 degree credits, \$149.25.

In-depth treatment of two or three of the following topics each quarter: prevention/management of cardiovascular diseases and coronary-disease-prone behavior; biofeedback; life-style interventions for persons who are obese, who smoke, or who are chemically dependent; chronic pain; compliance with medical regimens. Guest lecturers. (Prereq 5853 and #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 Arr., Hung

Alcohol and drug counseling education

See Family Social Science, page 202.

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Environmental health

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Public Health Environmental Health. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

- PubH 5151 ENVIRONMENTAL HEALTH.** 3 degree credits, \$149.25 (♦ \$74.75).
Methods for promoting man's health and comfort by controlling the environment. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)
Fall Qtr Sec 1 T—7-9:30, Mayo 1250, Singer
- PubH 5159 SEMINAR: ENVIRONMENTAL HEALTH.** 1 degree credit, \$49.75. **Tentatively scheduled for Spring 1986 and alternate years thereafter.**
- PubH 5241 ENVIRONMENTAL HEALTH ASPECTS OF WATER SUPPLY.** 3 degree credits, \$149.25.
Role of water in human health, physical, chemical and biological characteristics; evaluation of source, treatment, and distribution systems. Offered alternate years. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)
Spring Qtr Sec 1 T—7-9:30, Mayo 1250, Straub
- PubH 5244 ENVIRONMENTAL HEALTH ASPECTS OF WASTE WATER SYSTEMS.** 3 degree credits. **Tentatively scheduled for Spring 1986 and alternate years thereafter.**
- PubH 5267 ENVIRONMENTAL AND OCCUPATIONAL TOXICOLOGY.** 3 degree credits, \$149.25.
Basic principles of toxicology (absorption, distribution, metabolism, excretion, and site of action); tissue specificity of chemical injury; risk assessment. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)
Spring Qtr Sec 1 M—7-9:15, Mayo 1250, Stevens

Public Health One-Day, One-Credit Workshops

Facing us today are numerous social and health issues affecting youth and family that are important to both professionals and lay persons. In order to increase your awareness and understanding of these key issues, this series of one-day, one-credit workshops has been created. Workshop formats include slides, movies, guest speakers, case-study problem solving, and discussion; courses feature outstanding faculty from the University of Minnesota. Registrations must be received by the University at least 10 days prior to the date of the workshop you plan to attend.

- ★**PubH 5608 ALCOHOL AND THE FAMILY: EFFECTS ON THE FETUS AND THE CHILD.** 1 degree credit, \$49.75 plus \$18 special fee. Total \$67.75. (♦\$25 plus \$18 special fee. Total \$43)

One-day workshop reviews data on "Fetal Alcohol Syndrome;" alcohol misuse by family members and consequences on children, including the
(continued next page)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

child's emotional development. Intervention/prevention strategies presented with stress on role of community resources including school and health professionals. Tuition and fees include lunch and a workshop manual. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 200)

Winter Spec Term Sec 1 Sa—8 a.m.-4:30, Feb. 16, StCen Theatre,
StP Campus, ten Bensel
No late fee through Feb. 8

This course will also be offered in Duluth on Oct. 20 (call [218] 726-8113 for registration information); and in Morris on May 11 (call [612] 589-2211 for registration information).

★PubH 5625 **WORKING WITH ADOLESCENTS WORKSHOP.** 1 degree credit, \$49.75 plus \$18 special fee. Total \$67.75. (♦ \$25 plus \$18 special fee. Total \$43)

For teachers, school administrators, school nurses, and others dealing with teenagers. Presents the major problems of youth from the perspectives of professionals and teenagers. Focuses on drug use, teenage sexuality, juvenile delinquency, normal adolescent problems and concerns. Tuition and fees include lunch and a workshop manual. (No prereq. **Must be taken A-N.** Qualified students may register for graduate credit at the University of Minnesota. Limited to 200)

Spring Spec Term Sec 1 Sa—8 a.m.-4:30, Apr. 20,
StCen Theatre, StP Campus, Blum
No late fee through Apr. 12

This course will be offered in Rochester on Oct. 1 (call [507] 224-2263 for registration information).

★PubH 5640 **CHILD ABUSE AND NEGLECT SEMINAR.** 1 degree credit, \$49.75 plus \$18 special fee. Total \$67.75. (♦ \$25 plus \$18 special fee. Total \$43)

A one-credit seminar designed to apprise professionals and community persons of the causes, symptoms, and prevention of child abuse. Includes a historical overview, terminology, dynamics, and the school and community's role. Tuition and fees include lunch and a workshop manual. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 200)

Fall Spec Term Sec 1 Sa—8 a.m.-4:30, Nov. 3, StCen Theatre,
StP Campus, ten Bensel
No late fee through Oct. 26

★PubH 5643 **SEXUAL ABUSE OF CHILDREN.** 1 degree credit, \$49.75 plus \$18 special fee. Total \$67.75. (♦ \$25 plus \$18 special fee. Total \$43)

Increases knowledge and awareness of the issues of sexual abuse of children for professional and community persons. Historical overview, definitions, dynamics, outcomes, treatment and role of the school and community in the prevention of sexual abuse of children. Tuition and fees include lunch and a workshop manual. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 200)

Winter Spec Term Sec 1 Sa—8 a.m.-4:30, Jan. 26, StCen Theatre,
StP Campus, ten Bensel
No late fee through Jan. 18

Spring Spec Term Sec 2 Sa—8 a.m.-4:30, Apr. 13, Little Falls,
ten Bensel
No late fee through Apr. 5

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

★PubH 5644 **CHALLENGE OF PREVENTION: HEALTH PROMOTION FOR CHILDREN AND YOUTH.** 1 degree credit, \$49.75 plus \$18 special fee. Total \$67.75. (♦\$25 plus \$18 special fee. Total \$43)

This one-credit seminar designed to explore the issues and controversies dealing with prevention and health promotion for the younger population. Emphasis on maternal and child health history, terminology, legislative issues, evaluation, school health, and models for implementation. Tuition and fees include lunch and a workshop manual. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 200)

Spring Spec Term Sec 1 **Sa**—8 a.m.-4:30, Mar. 9, StCen Theatre, StP Campus, ten Bensel, Shanedling
No late fee through Mar. 1

Maternal and child health

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Public Health Maternal and Child Health. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

★PubH 5610 **PRINCIPLES OF MATERNAL AND CHILD HEALTH.** 3 degree credits, \$149.25.

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. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 100)

Fall Qtr Sec 1 **M**—6-8:30, HSUnitF 2-110, 2-140, Lia-Hoagberg

★PubH 5616 **RIGHTS OF CHILDREN AND YOUTH: ABUSE AND NEGLECT.** 4 degree credits, \$199. (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. Meets concurrently with HSU 5019. A joint Day/Extension class limited to a combined total of 100 Extension students)

Spring Qtr Sec 1 **MW**—4:15-6, MoosT 2-650, ten Bensel

★PubH 5622 **WOMEN'S HEALTH: ISSUES AND CONTROVERSIES.** 4 degree credits, \$199.

Issues and controversies affecting women's health care from an 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**—7-9:30, MoosT 2-580, Weiner

(See also Women's Studies)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

○PubH 5630 **FAMILY PLANNING ISSUES IN MATERNAL AND CHILD HEALTH.** 3 degree credits, \$149.25.

Family planning and related issues and their relationship to maternal and child health. Family decision making and problem solving. Students have opportunity to analyze issues and determine policy. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 Th—4:15-6:30, Mayo 1250, Lia-Hoagberg

★PubH 5631 **HEALTH NEEDS AND PROBLEMS OF ADOLESCENT FEMALES.** 4 degree credits, \$199.

Major health concerns, developmental risks and health behavior socialization patterns among adolescent females are analyzed from public health, youthwork, and ecological perspective. Implementation of preventive approaches, effective models of care, youth advocacy services and professional/parent education are emphasized. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with YoSt 5631. Limited to a combined total of 40)

Fall Qtr Sec 1 T—7-9:30, MoosT 2-580, Weiner

PubH 5633 **INTRODUCTION TO RESEARCH METHODS: UNDERSTANDING SOCIAL BEHAVIORAL RESEARCH IN THE HEALTH SCIENCES.** 3 degree credits, \$149.25.

Research design, sampling, measurement, survey research, interviewing, qualitative and quantitative methods, content analysis, coding, funding, and ethical dimensions of research activity. Promotes both understanding and applied skills required in research. (No prereq. **Must be taken S-N.** Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 M—4:30-7:30, HSUnitF 2-120, 2-130, Resnick

PubH 5634 **HEALTH PROBLEMS OF YOUTH.** 3 degree credits. Offered alternate years. Tentatively scheduled for 1985-86.

PubH 5635 **INTRODUCTION TO CONSULTATION IN YOUTHWORK.** 3 degree credits, \$149.25.

Overview major conceptual models for understanding consultation; use these to analyze consultation foci: program development, research, program evaluation, clinical cases. Focus both on role consultant, consultee. Emphasis on learning about consultation, not how to do it. Ethical issues covered. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 M—4:15-6, MoosT 2-530, Baizerman

PubH 5636 **ACCIDENT PREVENTION: A PUBLIC HEALTH PERSPECTIVE FOR PROGRAM PLANNING.** 3 degree credits, \$149.25.

Accidents as a public health issue and a social phenomenon. Through a comprehensive system approach, the course explores primary, secondary, tertiary prevention/health promotion efforts from political, managerial, and theoretical frameworks for accident program planning. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 T—5:15-7, MoosT 2-530, Shanedling

★PubH 5638 **SPECIAL TOPICS: SEMINAR ON ADOLESCENT CHILD BEARING/CHILD REARING.** 3 degree credits, \$YoSt 5130. Offered alternate years. Tentatively scheduled for 1985-86.

See also Television Course, PubH 5642, Child Abuse and Neglect, page 551.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

●PubH 5647 **HEALTHY ADOLESCENT DEVELOPMENT.** 3 degree credits, \$149.25.

For interdisciplinary audience of health professionals. Topics include physical, sexual, cognitive, moral and identity development, discussions about the social contexts of adolescence including family, peer groups, school, workplace and nature. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with CPsy 3303, sec 1, and 5303 sec 1. A joint Day/Extension class)

Fall Qtr Sec 1 W—6:20-8:50, MoosT 2-620, Williams

Public health administration

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Public Health Administration. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

★●PubH 5710 **TOPICS IN PUBLIC HEALTH ADMINISTRATION, REGULATION, AND HEALTH.** 3 degree credits, \$149.25.

Process of regulation in public health context. Perspectives of major disciplines on regulation, movement toward regulatory reform and use of non-traditional forms of regulation. Principles of administrative law reviewed; case studies in a variety of health-related areas examined. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 22 Extension students)

Fall Qtr Sec 1 W—6:15-8, PWB 2-470, McInerney

★●PubH 5711 **PUBLIC HEALTH LAW.** 4 degree credits, \$199.

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 30)

Spring Qtr Sec 1 M—4:15-6:30, MoosT 2-520, McInerney

●PubH 5731 **ADMINISTRATIVE ASPECTS OF PLANNING DISEASE PREVENTION/HEALTH PROMOTION PROGRAMS.** 4 degree credits, \$199.

Knowledge and skills for planning of disease prevention and health promotion programs; determining prioritized health risks and problems from use and analysis of available data; planning process for setting up prevention/promotion programs; management skills required for implementing, conducting, and evaluating these programs. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 T—6:15-8, MoosT 2-650, Mills, Gunderson
Th—6:15-8, MoosT 2-650

★●PubH 5732 **COMPETITION IN THE DELIVERY OF HEALTH SERVICES—A PUBLIC HEALTH PERSPECTIVE.** 3 degree credits, \$149.25.

Emergence of competition as a major factor in the delivery of health services and examination of current trends, proposals, regulatory alternatives, alternative delivery
(continued next page)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

system, reactions and behavior of providers, advertising and marketing, role of antitrust agencies and the courts related to competition with a focus on public health implications. (Prereq grad student, health-related professional, 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 T—4:15-6, Mayo 1220, Block

Public health nursing

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Public Health Nursing. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

●**PubH 5500 PUBLIC HEALTH—NORMAL GROWTH AND DEVELOPMENT.** 3 degree credits, \$149.25.

Critical analysis of selected theories of psychosocial cognitive and moral development; emphasis on developmental stages throughout the life span. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 T—4:15-7, Mayo 1210, Berkseth

★●**PubH 5516 ETHICAL DIMENSIONS OF PUBLIC HEALTH NURSING PRACTICE.** 1 degree credit, \$49.75.

Examination of ethical issues and dilemmas that confront public health nurses and agencies with discussion of how ethical/value aspects interface with political, legal, economic, and cultural considerations. (Prereq grad student or #. **Must be taken S-N.** 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 W—4:15-6; Sept. 26, Oct. 10, 24, Nov. 7, 21;
Mayo 1210, Aroskar

Public health nutrition

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Public Health Nutrition. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

●**PubH 5904 FACTORS AFFECTING NUTRITION BEHAVIOR.** 2 degree credits, \$99.50.

Basic factors involved in the formation of food habits; methods for modifying food habits and for promoting and maintaining the nutritional health of individuals and groups. (Prereq graduate student, Soc 3201 or equivalent, or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 T—9:15 a.m.-11, Mayo 1220, Fleming

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

PubH 5934 ADMINISTRATIVE SKILL BUILDING FOR NUTRITIONISTS AND DIETITIANS. 1 degree credit, \$49.75.

The course is offered in conjunction with the Administrative Skill Building IV Conference, scheduled for Jan. 7-11 in Honolulu, Hawaii. For information, contact Paula Saunders at (612) 373-7887

PubH 5935 NUTRITIONAL NEEDS AND REQUIREMENTS OF ADOLESCENTS. 3 degree credits, \$149.25.

Current issues in adolescent nutrition; nutritional requirements, food behavior, eating disorders, food faddism, nutritional needs of special groups (athletes, pregnant, and chronically ill adolescents), nutrition education/counseling techniques. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **M**—4:30-6:30, MoosT 2-520, Story

Veterinary public health

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Veterinary Public Health. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

PubH 3301 PERSPECTIVES: INTERRELATIONSHIPS OF PEOPLE AND ANIMALS IN SOCIETY TODAY. 2-3 degree credits, \$5301, 5303, 5304, \$CVM 3100, \$49.75 per credit. (IS)

Explores the interrelationship of people and animals in society today from several related and/or opposing viewpoints. The social, economic, and health consequences of these relationships are examined including problems and issues such as pets and people sharing an urban environment; concerns over questions of animal rights; differences in cultures and their influence on animal/human relationships in society today. (No prereq. Meets concurrently with 5301. A joint Day/Extension class)

Spring Qtr Sec 1 **MW**—3:15-5, PWB 2-470, R Anderson, Quigley

PubH 5301 PERSPECTIVES: INTERRELATIONSHIPS OF PEOPLE AND ANIMALS IN SOCIETY TODAY. 2-3 degree credits, \$3301, 5303, 5304, \$CVM 3100, \$49.75 per credit.

See description for PubH 3301. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3301. A joint Day/Extension class)

Spring Qtr Sec 1 **MW**—3:15-5, PWB 2-470, R Anderson, Quigley

Public Policy

For information on noncredit conferences or lectures on public policy, please contact William C. Rogers, 306 Westbrook Hall; telephone 373-3709.

(See also related courses in Public Affairs, History, Informal Courses, Political Science)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Q

Quantitative Analysis (QA)

See Decision Sciences

R

Real Estate (RE)

Textbooks for most RE courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450)

(See also Accounting; Architecture; Business Law; Design; Economics; Finance; General College; Geography; Informal Courses; Insurance; Management; Marketing; and Public Affairs)

Your attention is called to the Real Estate Certificate Program, page 601.

William J. Angell, Professor and Extension Housing Specialist

Grover Cleveland, Associate Professor, Accounting

Ann Conley, Training Coordinator, Common Space

Larry Carlson, Vice President, Area Research and Planning, Dayton Hudson Corporation

Dale Dahl, Professor, Agricultural and Applied Economics, and Adjunct Professor of Law

Dan Diebold, Broker, Diebold Properties

Robert J. Galush, Assistant Vice President, Twin City Federal Savings and Loan Association

Scott Getty, President, Solatech, and Director, Ouroboros South

Alvin Happke, First Vice President and Director of Branches, Twin City Federal Savings and Loan Association

Thomas J. Hirsch, CPM, President, Hirsch-Newman Company

Robert S. Hutchinson, SREA, Hutchinson Appraisals

Walter Klus, Vice President, Norwest Properties

James Lammers, AIA, Vice President, Hills Gilbertson Architects, Inc.

Thomas R. Lundstedt, Broker/Investor

Gene Malis, Director of Rehabilitation Training, Dakota County Housing and Redevelopment Authority

Jeanne Matross, Staff Attorney, U.S. Department of Housing and Urban Development

Greg Moon, Vice President, RW Financial Services

Thomas C. Munger, Munger Insurance Agency

Thomas Musil, Director, Real Estate Education, University of Minnesota

Merv Nordstrom, CPA, Julius and Nordstrom

Herbert F. Nyberg, SREA, MAI, Chief Appraiser, City of Minneapolis

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Roger A. Peterson, Residential Energy Engineer, Minnesota Department of Energy and Economic Development

Robert Sykes, Assistant Professor of Architecture

Dennis Taylor, Shenehon-Goodlund-Taylor-Fruen, Inc.

Maurice F. Wagner, Assistant Vice President, FBS Mortgage Corporation

Sidney I. Weisberg, Broker, Sidney I. Weisberg & Associates

Andrew F. Whitman, Professor of Finance and Insurance

Barry L. Wittenkeller, Attorney, Tischleder, Tatone, and Wittenkeller

The University of Minnesota offers college-level real estate courses of an accelerated and specialized nature. Real estate courses fulfill degree and certificate requirements for real estate students in addition to the Minnesota Department of Commerce requirements for real estate salespersons and brokers under Minnesota Statutes Section 82.22 Subdivision 6 for initial pre- and post-licensing education requirements and under Minnesota Statutes Section 82.22 Subdivision 13 relating to Continuing Real Estate requirements. The instructional staff is composed of real estate brokers, developers, appraisers, property managers, lenders, University faculty, and a variety of Real Estate specialists in business and government.

For information on Minnesota Real Estate License Requirements, contact the Minnesota Department of Commerce, 500 Metro Square Bldg, St. Paul, MN 55101. Telephone (612) 296-6319.

For information on real estate certificate and degree plans, contact the Real Estate Education Program Office, 337 Nolte Center, University of Minnesota, Minneapolis, MN 55455. (612) 376-8846.

For further information on the Real Estate Education Program, see page 601.

Minnesota License Law

In an effort to meet the increasing demand for required real estate pre-licensing education, the University has developed a specialized course aimed at serving the needs of individuals seeking real estate licensing, allied professionals needing foundation preparation in real estate practice, and University real estate students who wish to combine the two initial prerequisite real estate course requirements. This course consolidates RE 0801C and RE 0802C. See RE 0803C, *Introduction to Real Estate Courses I and II*.

Continuing Education Accreditation

To address the needs of Real Estate practitioners seeking quality college-level educational opportunities for professional development and growth, the University has obtained certification from the Minnesota Department of Commerce pursuant to Minnesota Statutes 82.22 Subdivision 13 relating to required real estate continuing education. Real estate seminars and conferences also are offered regularly by the Department of Conferences at the University. For seminar information, contact Lori Graven at (612) 373-5361.

Course	Continuing Education Hours
RE 0804C Real Estate Property Management*	30
RE 0805C Community Association Management	25
RE 0807C Real Estate Law I*	30
RE 0808C Principles of Real Estate Finance*	30
RE 0810C Real Estate Investment Analysis*	30
RE 0811C Residential Energy Conservation for Real Estate Practice	20
RE 0812C Housing Inspection	30
RE 0813C Real Estate Development	25
RE 0815C Taxation of Property	25

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Course

RE 9822C Business Site Selection and Analysis	20
RE 0827C Corporate Real Estate Administration	25
RE 0828C Property Insurance and Financial Planning for Real Estate Practice	25
RE 0829C Real Estate Law II	30
RE 0901C Introduction to Appraising Real Property*	35
RE 0902C Applied Residential Property Valuation	35
RE 0904C Applied Income Property Valuation	30

*Approved for the third course of study under Minnesota Statutes 82.22 Subdivision 6

RE 0600C CONSUMER ASPECTS OF RESIDENTIAL REAL ESTATE: BUYING AND SELLING. 3 certificate credits, \$111 plus \$20 course fee. Total \$131.

An examination and review of the questions and complexities encountered in buying and selling Real Estate. Topics include buyer/seller market search strategies, selecting professional services, real estate financing, legal implications and contracts, housing inspection, codes and minimum property standards, taxation, real estate as an investment, and property management. (No prereq)

Fall Qtr Sec 1 T—6:10-8:10, MinMet 120

Spring Qtr Sec 2 T—6:10-8:10, MinMet 120

RE 0700C AN ORIENTATION TO REAL ESTATE CAREERS. 2 certificate credits, \$74 plus \$20 course fee. Total \$94.

Familiarizes students with the specialty areas of real estate practice and how to prepare appropriate individual career development and educational goals and objectives. Topics include real estate brokerage, property management, real estate law, corporate real estate, real estate development, agricultural real estate, finance, appraisal, construction/rehabilitation, and government service. (No prereq)

Fall Qtr Sec 1 Th—6:10-8:10, AkerH 211, Musil

Spring Qtr Sec 2 Th—6:10-8:10, AkerH 215, Musil

★RE 0801C INTRODUCTION TO REAL ESTATE, COURSE I. 3 certificate credits, \$111 plus \$20 course fee. Total \$131.

The basics of real estate practice including industry practices, licensing law, Law of Agency, law of contracts, real estate finance, types and classification of property, title examination search and closing procedures. **May not be taken concurrently with RE 0802C.** (No prereq. Meets concurrently with Dsgn 3562. Limited to a combined total of 100)

Fall Qtr Sec 1 T—6:10-9:10, AndH 330, Weisberg

Spring Qtr Sec 2 T—6:10-9:10, AndH 330, Weisberg

★RE 0802C INTRODUCTION TO REAL ESTATE, COURSE II. 3 certificate credits, \$111 plus \$20 course fee. Total \$131.

The second introductory course in Real Estate including residential appraisal practices, search and examination of title, deeds, residential construction, land development and use, condominiums, cooperatives, and planned unit developments, taxation, real estate as an investment, and property management. **May not be taken concurrently with RE 0801C.** (Prereq RE 0801C. Limited to 75)

Winter Qtr Sec 1 T—6:10-9:10, AndH 210, Weisberg

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

RE 0803C INTRODUCTION TO REAL ESTATE, COURSES I & II. 6 certificate credits, \$222 plus \$20 course fee. Total \$242.

This course combines RE 0801C and Re 0802C. The basics of real estate practice including real estate licensing law, Law of Agency and law of contracts, classification of property, real estate finance, title examination search, closing procedures, construction, land use controls, condominiums/cooperatives/planned-unit developments, taxation, appraisal, investment, and property management. (No prereq)

Fall Qtr Sec 1 **MW**—6:10-9:10, FraserH 102, Weisberg

Winter Qtr Sec 2 **MW**—6:10-9:10, FordH 155, Weisberg

Spring Qtr Sec 3 **MW**—6:10-9:10, FordH 155, Weisberg

RE 0804C REAL ESTATE PROPERTY MANAGEMENT. 3 certificate credits, \$111 plus \$20 course fee. Total \$131.

An introductory course developed by the Institute of Real Estate Management which focuses on the application of the real estate management process, emphasizing property analysis, the relationship between operation and value, the scope and history of property management, market operations, and administration. Offered in cooperation with the Institute of Real Estate Management (IREM). (Prereq 0802C or experience in real estate)

Fall Qtr Sec 1 **T**—6:10-9:10, AkerH 317, C.P.M. Members, Institute of Real Estate Management

Spring Qtr Sec 2 **T**—6:10-9:10, AkerH 313, C.P.M. Members, Institute of Real Estate Management

RE 0805C COMMUNITY ASSOCIATION MANAGEMENT. 3 certificate credits, \$111 plus \$20 course fee. Total \$131.

Designed for developers, property managers, condominium and cooperative owners, tenants, and attorneys for homeowners associations. Topics include legal structure and responsibilities/liabilities of homeowner association members, officers, and staff; accounting and administrative operations issues; financial statements; transfer of membership interests; management policy; human relations; and maintenance planning. (No prereq)

Winter Qtr Sec 1 **M**—6:10-8:40, MinMet 124, Conley, Matross

RE 0806C REAL ESTATE MARKETING. 3 certificate credits, \$111 plus \$20 course fee. Total \$131.

An introductory real estate marketing course emphasizing the daily marketing activities including: securing and counseling clients, market analysis, advertising, proper follow-up concerning listings, sales promotion, time management, listing techniques, client control, public relations, and ethics. (Prereq 0802C or experience in real estate)

Spring Qtr Sec 1 **M**—6:10-8:10, MinMet 124, Diebold

RE 0807C REAL ESTATE LAW I. 3 certificate credits, \$111 plus \$20 course fee. Total \$131.

A study of real estate law involving real property contract law; acquisitions; ownership; listing agreements; deeds; liens; mortgages; closing procedures; foreclosures; redemption; zoning; condominium law; conveyance problems; fair housing law; landlord/tenant legal problems and real estate brokerage and agency relations. (Prereq RE 0802C or experience in real estate)

Fall Qtr Sec 1 **Th**—6:10-9:10, AkerH 215, Matross, Wittenkeller

Winter Qtr Sec 2 **Th**—6:10-9:10, AkerH 215, Matross, Wittenkeller

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

RE 0808C PRINCIPLES OF REAL ESTATE FINANCE. 3 certificate credits, \$111 plus \$20 course fee. Total \$131.

A comprehensive approach to the financial tools and the operation of the mortgage market in relation to residential real estate practice. Topics include: mortgage loan closing procedures; construction loan financing; Federal Housing Administration/Veterans Administration/Minnesota Housing Finance Agency mortgage programs; graduated mortgage payment programs; conventional mortgages; mortgage loan appraisal; loan settlement procedures; alternative mortgage instruments; contract for deed financing; and mortgage document review. This course is designed to cover the institutions, methods, instruments and procedures of residential real estate finance. (Prereq RE 0802C or experience in real estate)

Fall Qtr Sec 1 **M**—6:10-9:10, MechE 221, Happke

Spring Qtr Sec 2 **W**—6:10-9:10, MechE 221, Happke

RE 0810C REAL ESTATE INVESTMENT ANALYSIS. 4 certificate credits, \$148 plus \$20 course fee. Total \$168.

Fundamentals of analyzing and evaluating investments in income-producing real estate properties. Operating statement; financing effects; depreciation methods; tax analysis; exchanging properties; valuation. Collection and analysis of investment data from a current field of study. (No prereq)

Fall Qtr Sec 1 **T**—6:10-8:40, MinMet 124, Lundstedt

RE 0811C RESIDENTIAL ENERGY CONSERVATION FOR REAL ESTATE PRACTICE. 3 certificate credits, \$111 plus \$20 course fee. Total \$131.

An introduction to residential energy conservation methods. Topics include: mechanical system performance, alternative energy sources, energy economics, system payback analysis, retro-fitting existing structures, passive and active solar systems, current federal and state tax incentives for energy conservation. This course emphasizes the principles and concepts of single family energy use from the perspective of the home owner, home buyer, and home builder. Government subsidized financing for energy improvements. (No prereq)

Winter Qtr Sec 1 **Th**—6:10-8:10, AndH 270, Getty, Peterson

RE 0812C HOUSING INSPECTION. 3 certificate credits, \$111 plus \$20 course fee. Total \$131.

A comprehensive course on residential housing inspection including analysis of major structural components; electrical, plumbing, heating systems, interior/exterior rehabilitation; VA/FHA minimum property standards; estimating, bidding, specifications, materials selection, change orders, permits, completing housing inspection reports, and a tour of a distressed property. (No prereq)

Fall Qtr Sec 1 **M**—6:10-9:10, AkerH 209, Malis

Winter Qtr Sec 2 **T**—6:10-9:10, Arch 15, Malis

RE 0813C REAL ESTATE DEVELOPMENT. 4 certificate credits, \$148 plus \$20 course fee. Total \$168.

Fundamentals of real estate development and investment building. Processes and roles of specialists in the development of investment projects. Topics covered include: cash flow analysis, project budget estimating, financing, depreciation, land acquisition, market analysis, government regulation, retail/commercial developments, and condominium development. This course is designed for real estate

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Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

professionals, architects, mortgage lenders, and home builders. **Must be taken S-N.** (Prereq RE 0802C or real estate experience. Meets concurrently with Arch 5125)

Fall Qtr Sec 1 **M**—6:20-8:50, Arch 25, Lammers

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

RE 0815C TAXATION OF PROPERTY. 3 certificate credits, \$111 plus \$20 course fee. Total \$131.

Study of the tax consequences of transactions relating to the purchase, sale, and exchange of real property including income tax considerations, deductions, depreciation, property assessment, capital gains issues, tax aspects of new construction, minimum tax situations, investment tax credits, contract for deed and property exchange tax issues, business organization issues, real estate investment trusts and syndications. (No prereq)

Fall Qtr Sec 1 **W**—6:10-8:40, KoltH S134, Moon

RE 0816C DIRECTED STUDY. Credits arranged, \$37 per credit.

Subject matter arranged. Areas of study useful for real estate practice not available in regular real estate program curriculum. Independent study and internships in real estate may be arranged. Contact Thomas Musil, Director, Real Estate Education, 337 Nolte Center, 315 Pillsbury Drive S.E., University of Minnesota, Minneapolis, MN 55455. Telephone (612) 376-8846.

RE 0822C BUSINESS SITE SELECTION AND ANALYSIS. 3 certificate credits, \$111 plus \$20 course fee. Total \$131.

A comprehensive study of the current state of the art in site selection and analysis of retail, restaurant, commercial, industrial, shopping center, multi-family, and multi-use real estate. Topics include site attributes, appraisal considerations, analysis of competition, determination of market potential, consumer research methodology; analysis of demographic, economic, employment base, income, and educational data. (No prereq)

Fall Qtr Sec 1 **M**—6:10-8:10, Phys 157, Carlson

RE 0827C CORPORATE REAL ESTATE ADMINISTRATION. 3 certificate credits, \$111 plus \$20 course fee. Total \$131.

An introduction to the policy, administration, and profit strategies employed in corporate real estate decision making. Content includes development and structure of a corporate real estate department, performance and financial criteria for decision making, site acquisition and negotiation, development, leasing, and lease renewals, site planning and design, government and community relations, insurance, energy management, and site selection techniques. (No prereq)

Spring Qtr Sec 1 **Th**—6:10-8:40, Arch 10, Klus, Musil

RE 0828C PROPERTY INSURANCE AND FINANCIAL PLANNING TECHNIQUES FOR REAL ESTATE PRACTICE. 3 certificate credits, \$111 plus \$20 course fee. Total \$131.

First 5 weeks: A comprehensive review and study of the kinds and types of insurance necessary and advisable to adequately cover all types of property. Topics include an analysis of homeowners insurance, personal liability, commercial fire and liability, commercial fire, multi-peril, and business owners policies. *Second 5 weeks:* A comprehensive overview of financial planning techniques and the investor's options with respect to real estate as opposed to other investment mediums. Topics include

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Read about abbreviations, symbols, and maps on page 60.

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goals and methods of financial management, the roles of professional advisors, investment real estate, inflation, taxation, personal savings and investment programs, and limited partnerships. (No prereq)

Spring Qtr Sec 1 T—6:10-8:40, AkerH 215, Munger, Whitman

RE 0829C REAL ESTATE LAW II. 3 certificate credits, \$111 plus \$20 course fee. Total \$131.

Designed to address legal issues faced by real estate brokers, developers, property managers, and other professionals working in real estate. Topics include agency law, mortgage law, dispute resolution and litigation, bankruptcy filings, leases, divorce and estates, real estate securities, contract for deed termination, environmental law, community association law, and mortgage foreclosures. A case study approach is used to examine the legal issues faced in real estate listing, sales, and contracts. (Prereq RE 0802C or experience in real estate)

Spring Qtr Sec 1 W—6:10-8:40, KoltH S137, Matross, Wittenkeller

new

Real Estate Appraising

The following three courses (RE 0901C, RE 0902C, and RE 0904C) lead to professional designations in the American Institute of Real Estate Appraisers and the Society of Real Estate Appraisers. For information on requirements leading to a professional designation, contact Clifford R. Johnson, (612) 546-1338. Instructional staff for each course are practicing appraisers approved and trained by the American Institute of Real Estate Appraisers and the Society of Real Estate Appraisers. Coordinator for these courses is Clifford R. Johnson, M.A.I., S.R.E.A.

For a separate catalog of additional appraisal courses offered in week-long, concentrated formats by the American Institute of Real Estate Appraisers and cosponsored by the University of Minnesota, call Lori Graven at (612) 373-5361. One- and two-day seminars also are offered periodically by the Society of Real Estate Appraisers and the American Institute of Real Estate Appraisers. For appraisal seminar information, call (612) 373-5361.

RE 0901C AN INTRODUCTON TO APPRAISING REAL PROPERTY. 4 certificate credits, \$148 plus \$166 special fee. Total \$314.

Course 101 of the Society of Real Estate Appraisers. Particular emphasis is placed on the use of fundamental appraisal principles and tools for the valuation of residential properties. The course includes a summary introduction to the physical, legal and economic characteristics of real estate and real estate markets. Course 101 is an authoritative introduction to the field of real property valuation for the beginning appraiser, real estate salesperson, lender, assessor or builder. Includes one optional, residential on-site inspection. Credits count toward the S.R.A. designation. (Prereq RE 0802C)

Fall Qtr Sec 1 W—6:10-9:40, FordH 155, Galush, Taylor

RE 0902C APPLIED RESIDENTIAL PROPERTY VALUATION. 4 certificate credits, \$148 plus \$166 special fee. Total \$314.

Course 102 of the Society of Real Estate Appraisers. A review of basic residential appraisal techniques and introduction of sophisticated techniques in applicable forms. Topics include appraisal case study analysis, internal consistency of residential appraisal analysis, appraisal business practices, supportive file data for neighborhood analysis, paired sales comparison, depreciation extraction, sequential analysis, use of automated and published

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cost information, trade breakdown depreciation, gross rent multiplier analysis, simple and multiple linear regression. Credits count toward the S.R.A. designation. (Prereq RE 0901C)

Winter Qtr Sec 1 **W**—6:10-9:40, FordH 130, Galush, Taylor

RE 0904C APPLIED INCOME PROPERTY VALUATION. 4 certificate credits, \$148 plus \$166 special fee. Total \$314.

A comprehensive and applied work-problem course developed around two case-study properties: a multi-family apartment and an industrial building. The concept of highest and best use is examined, and each approach to value is developed for each case-study property. The treatment of adjustments, paired sales analysis, and the development of units of comparison are presented in practical work problems. The development of gross income multipliers, overall rates, and rates for equity dividend and yield also are presented in numerous work problems. Cash flow analysis, the treatment of various types of income streams, cost equivalency problems, and the valuation of lease interests also are covered, in addition to mortgage equity analysis, debt service coverage methods of valuation, and the residual approaches to value estimates. Credits count toward the S.R.P.A. designation. (Prereq RE 0903C)

Spring Qtr Sec 1 **W**—6:10-9:10, FordH 150, Hutchinson, Wagner

Recreation, Park, and Leisure Studies (Rec)

College of Education

(School of Physical Education, Recreation, and School Health Education)

Textbooks for most Rec courses are available at the Minnesota Book Center in Williamson Hall (373-3688).

Leo McAvoy, Jr., Associate Professor of Recreation and Park Administration
Stuart Schlein, Assistant Professor of Recreation and Park Administration

★**Rec 3800 WORKSHOP: SPECIAL TOPICS IN RECREATION PROGRAMMING.** 1-12 cr (max 12 cr). This offering 3 degree credits, \$141.75.

Background and current developments in recreation programming designed for program and allied service personnel. Focus this quarter: **Winter Backpacking and Camping. Must be taken A-N.** (Prereq Δ ; not open to MEd or graduate students. Limited to 30)

Winter Qtr Sec 1 **M**—4:15-6 (plus hrs arr), CookeH 206, McAvoy

★**Rec 5100 FOUNDATIONS OF RECREATION.** 3 degree credits, \$8120, \$141.75.

Investigation of the historical, sociological, and educational bases of the recreative use of leisure time in contemporary society. **Must be taken A-N.** (Prereq M.Ed., adult special, or grad student. 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, McAvoy

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★○Rec 5900 **WORKSHOP: CONTEMPORARY ISSUES IN LEISURE SERVICES.** 1-12 degree credits (maximum 12 cr). 3 degree credits this offering, \$141.75.

Contemporary issues emphasizing administrative and supervisory functions for recreation and allied professionals; individual offerings focus on special issues and/or professional groups. Involves activities designed to teach students to develop, deliver, and evaluate community-based leisure services for special populations. An initial study of the philosophy of normalization, mainstreaming, and programming in least restrictive environments is followed by techniques to develop community recreation service delivery systems designed to serve a wide range of individuals with handicapping conditions. Focus this quarter: **Community Leisure Services for Special Populations. Must be taken A-N.** (Prereq Δ. 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**—4:15-7, CookeH 214, Schleien

Religious Studies (ReIS)

College of Liberal Arts

Textbooks for most ReIS courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

Ronald Delattre, Professor of American Studies

Robert B. Tapp, Professor of Humanities

Tzvee Zahavy, Associate Professor of Ancient Near Eastern and Jewish 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 376-3000 two weeks before mail registration for that quarter begins.

ReIS 1034 INTRODUCTION TO JUDAISM. 4 degree credits, \$JwSt 1034, \$JwSt 3034, \$148. (◆\$74)

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. May be applied toward the CLA second-language requirement, Route II, for Hebrew [see page 562]. Meets concurrently with JwSt 1034, 3034)

Fall Qtr Sec 1 **T**—6:20-8:50, FolH 104, Zahavy

ReIS 1035 INTRODUCTION TO CHRISTIANITY. 4 degree credits, \$148. (◆\$74)

The thought and institutions of Christianity, with emphasis on the present day. Origins in Judaism: the New Testament. Continuing theological issues, leaders and opponents of the Church, the piety of the average Christian. Religious pluralism: Christianity in twentieth-century America. (No prereq)

Spring Qtr Sec 1 **M**—6:20-8:50, FordH 130, Tapp

ReIS 5960 RELIGIOUS ETHICS IN AMERICA. 4 degree credits, \$AmSt 5920, \$154. (◆\$77)

Approaches and contributions to religious ethics in America, including historical background. Primary attention given to how different versions of religious ethics

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address such concerns as nuclear weapons, peace and war, and biomedical issues of birth, death, and medical care. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with AmSt 5920)

Winter Qtr Sec 1 **W**—6:20-8:50, LindH 305, Delattre

Rhetoric (Rhet)

College of Agriculture

(Technical Communication Program)

Textbooks for Rhet courses on the Minneapolis campus and at neighborhood centers are available at the Minnesota Book Center in Williamson Hall (373-3688); books for courses on the St. Paul campus are available at Books Underground on the St. Paul campus (373-0800)

(See also Study Skills; General College; English; Composition and Communications; Informal Courses; and other study helps, page 549. For a free course on how to use University libraries, see page 498)

J. Michael Bennett, Associate Professor of Rhetoric

James E. Connolly, Professor of Rhetoric

Richard W. Ferguson, Associate Professor of Rhetoric

Earl E. McDowell, Professor of Rhetoric

L. David Schuelke, Professor of Rhetoric

Margaret L. Somers, Assistant Professor of Rhetoric

Arthur E. Walzer, Associate Professor of Rhetoric

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 376-3000 two weeks before mail registration for that quarter begins.

★**Rhet 1147 EFFICIENT READING.** 4 degree credits, \$5147, \$148 plus \$3 course fee. Total \$151. (IS)

The adult reading process is explored with emphasis on comprehension, speed, and vocabulary development. For persons of average or above-average reading ability who wish to develop and refine college-level reading skills. Not a basic course. (No prereq. Meets concurrently with 5147. Limited to 40)

Fall Qtr Sec 1 **T**—6:30-9, FordH 115, Bennett

Winter Qtr Sec 2 **T**—6:30-9, HckrH 210, StP Campus, Bennett

Spring Qtr Sec 3 **T**—6:30-9, FordH 115, Bennett

★**Rhet 3562 WRITING IN YOUR PROFESSION.** 4 degree credits, \$194.

Methods of exposition in transactional writing; the functions of scientific and technical writing in the professional workplace; types of reports; audience analysis; continuous practice in report writing; resume, application letter, and interview. (Prereq junior standing. Limited to 23)

Fall Qtr Sec 1 **T**—6:20-8:50, FordH 175, Somers

Winter Qtr Sec 2 **T**—6:20-8:50, FordH 175, Ferguson

Spring Qtr Sec 3 **M**—6:20-8:50, FordH 175, Walzer

(See also technical writing courses in Composition and Informal Courses)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★Rhet 5147 EFFICIENT READING. 4 degree credits, \$1147, \$194 plus \$3 special fee. Total \$197.

The adult reading process is explored with emphasis on comprehension, speed, and vocabulary development. For persons of average or above-average reading ability who wish to personally develop and refine college-level reading skills, and also to acquire an understanding of the linguistic, psychological, and physiological aspects of the complex human skill of reading. An evaluative paper and some seminar meetings (times to be arranged) are required. (No prereq. Meets concurrently with 1147. Qualified students may register for graduate credit at the University of Minnesota. Limited to 10)

Fall Qtr Sec 1 T—6:30-9, FordH 115, Bennett

Winter Qtr Sec 2 T—6:30-9, HckrH 210, StP Campus, Bennett

Spring Qtr Sec 3 T—6:30-9, FordH 115, Bennett

★Rhet 5257 SCIENTIFIC AND TECHNICAL PRESENTATIONS. 4 degree credits, \$194.

Presentations for specific situations related to technical or scientific topics. Audience analysis and adaptation, techniques of support and visualization, organization for clarity and accuracy, and techniques of interpreting and answering questions. Students will make and evaluate technical and scientific presentations. Emphasis on seminar reports and professional conference papers. (Prereq 1222, 3562 or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 15)

Fall Qtr Sec 1 T—6:30-9:30, HckrH 224, StP Campus, Connolly

Spring Qtr Sec 2 T—3-5:45, HckrH 224, StP Campus, Connolly

(A joint Day/Extension class limited to
9 Extension students)

★Rhet 5258 INTERVIEWING: DYNAMICS OF FACE-TO-FACE COMMUNICATION. 4 degree credits, \$194.

Designed to improve 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 18)

Fall Qtr Sec 1 W—6:20-8:50, HckrH 222, StP Campus, McDowell

Winter Qtr Sec 2 W—6:20-8:50, HckrH 222, StP Campus, McDowell

★Rhet 5400 DISSEMINATION AND UTILIZATION OF INFORMATION. 4 degree credits, \$194.

Methods and processes of using specialized information. Study of cases and development of materials for application in professional fields. Emphasis on channels for dissemination and utilization. (Prereq junior, senior, or graduate standing. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Fall Qtr Sec 1 M—6:20-8:50, HckrH 302, StP Campus, Schuelke

★Rhet 5500 RESEARCH IN COMMUNICATION STRATEGIES. 4 degree credits, \$Aglo 5500, \$194.

Introduction to basic research design and methodology in communication. Emphasis on application of various research methods to particular communication strategies or

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

settings. (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—4-6:45, HckrH 209, StP Campus, McDowell

★ORhet 5571 **WRITING FOR SPECIAL PURPOSES.** 2 degree credits, \$97.

Analysis of and writing practice in a specific genre of practical writing (grant proposal, procedures and policies manual, operations manual). Content varies from quarter to quarter. (Prereq technical communication major or minor, freshman communication, 3562 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 7 Extension students)

Spring Spec Term Sec 1 W—4-5:45, Mar. 27-Apr. 24, HckrH 224,
StP Campus, Ferguson

★ORhet 5600 **TRANSFER OF TECHNOLOGY.** 4 degree credits, \$AgJo 5600, \$194.

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 of technical or scientific communication will be presented. An assessment and design plan for an actual program of technology transfer will be required. (Prereq work experience in scientific technical communication 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 M—4-6:45, HckrH 302, StP Campus, Schuelke

Russian and East European Studies

College of Liberal Arts

Textbooks for most courses in this department are available at the Minnesota Book Center in Williamson Hall (373-3688)

Adele Donchenko, Associate Professor of Slavic Languages

Gary Jahn, Associate Professor of Slavic Languages

Catherine Kulesov, Associate Professor of Slavic Languages

Leonard A. Polakiewicz, Assistant Professor of Slavic Languages

Tatiana Prokopov, Assistant Professor of Slavic Languages

(See also Hist 5266, Modern Russia: The 20th Century; and IC 0603, The Soviet Union Today)

Read about language laboratories on page 56.

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Russian and East European Studies. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

Polish (Plsh)

Plsh 1101-1102-1103 BEGINNING POLISH. 5 degree credits each quarter, \$185 each quarter. (IS 1101)

Speaking, understanding, and reading basic Polish. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103)

Fall Qtr 1101 Sec 1 M—6:10-9:30, FolH 103, Polakiewicz

Winter Qtr 1102 Sec 2 M—6:10-9:30, FolH 307, Polakiewicz

Spring Qtr 1103 Sec 3 M—6:10-9:30, CivMinE 214, Polakiewicz

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

SUMMER TERM IN POLAND

Polish in Lublin: Summer Term (six weeks, 1984) at Marie Curie-Sklodowska University in Lublin, Poland. Cosponsored by the Department of Russian and East European Studies and Extension Classes Office of Study Abroad. Polish language instruction, culture course, and one-week field trip. (9 credits.) **For information:** call Extension Classes Office of Study Abroad at 376-5049.

Russian (Russ)

The following nonlanguage class may be applied toward the CLA second language requirement, Route II for Russian [see page 562]: Hist 5264, 5265, 5266.

Russ 1101-1102-1103 BEGINNING RUSSIAN. 5 degree credits each quarter, \$185 each quarter. (IS)

Grammar, pronunciation, reading, and practice in speaking. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103)

Fall Qtr 1101 Sec 1 T—6:10-9:30, FolH 307, Donchenko

Winter Qtr 1102 Sec 2 T—6:10-9:30, FolH 307, Prokopov

Spring Qtr 1103 Sec 3 T—6:10-9:30, FolH 307, Jahn

Russ 3031 SCIENTIFIC RUSSIAN. 4 degree credits, \$154.

Russian morphology, syntax, and scientific vocabulary to acquire reading competence in scientific Russian. Reading of texts in different scientific fields. (No prereq)

Spring Qtr Sec 1 W—6:20-9, FolH 103, Donchenko

Russ 5401 DOSTOEVSKY IN TRANSLATION. 4 degree credits, \$154. (♦\$77)

Analytic approach to study of novels of Dostoevsky. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 W—6:20-9, FolH 208, Kulesov

S**Scandinavian Languages****College of Liberal Arts**

Textbooks for most Scan courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

(See also CEW 0110, Gods and Giants of Ancient Scandinavia)

Poul Houe, Associate Professor of Scandinavian

William Mishler, Associate Professor of Scandinavian

Allen Simpson, Professor of Scandinavian

Göran Stockenström, Professor of Scandinavian

K. Börje Vähämäki, Associate Professor of Scandinavian

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Read about language laboratories on page 56.

The following nonlanguage classes may be applied toward the CLA second language requirement, Route II for Danish, Finnish, Norwegian, Swedish (see page 562): ArH 5641, Scan 3601, 3607.

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 376-3000 two weeks before mail registration for that quarter begins.

Finnish (Fin)

Fin 1101-1102-1103 BEGINNING FINNISH. 5 degree credits each quarter, \$185 each quarter. (IS 1101)

This sequence, 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. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103)

Fall Qtr 1101 Sec 1 T—6:10-10:05, FolH 302, Vähämäki

Winter Qtr 1102 Sec 2 T—6:10-10:05, FolH 302, Vähämäki

Spring Qtr 1103 Sec 3 T—6:10-10:05, FolH 103, Vähämäki

Norwegian (Nor)

Nor 1101-1102-1103 BEGINNING NORWEGIAN. 5 degree credits each quarter, \$185 each quarter. (IS 1101, 1102)

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 composition. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103)

Fall Qtr 1101 Sec 1 M—6:10-10:05, FolH 104, Mishler
(Limited to 40)

Winter Qtr 1102 Sec 2 M—6:10-10:05, FolH 103, Mishler

Spring Qtr 1103 Sec 3 M—6:10-10:05, FolH 52, Mishler

Nor 1104-1105 INTERMEDIATE NORWEGIAN. 5 degree credits for 1104, \$185. 4 degree credits for 1105, \$148. (Prereq 1103 or equivalent)

Fall Qtr 1104 Sec 1 W—6:10-10:05, FolH 103, Simpson

Winter Qtr 1105 Sec 2 W—6:20-8:50, FolH 103, Simpson

Swedish (Swed)

Swed 1101-1102-1103 BEGINNING SWEDISH. 5 degree credits each quarter, \$185 each quarter. (IS 1101)

This sequence, intended for students who have little or no previous knowledge of Swedish, stresses fundamentals of grammar, correct pronunciation, reading, prac-
(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

S

tice in conversation, and simple composition. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103)

Fall Qtr 1101 Sec 1 **M**—6:10-10:05, FolH 302, Stockenström

Winter Qtr 1102 Sec 2 **M**—6:10-10:05, FolH 302, Stockenström

Spring Qtr 1103 Sec 3 **M**—6:10-10:05, FolH 302, Stockenström

Swed 1104-1105 INTERMEDIATE SWEDISH. 5 degree credits for 1104, \$185. 4 degree credits for 1105, \$148.

(Prereq 1103 or equivalent)

Fall Qtr 1104 Sec 1 **W**—6:10-10:05, FolH 108, Stockenström

Winter Qtr 1105 Sec 2 **W**—6:20-8:50, FolH 203, Stockenström

Scandinavian (Scan)

Scan 3601 GREAT LITERARY WORKS OF SCANDINAVIA. 4 degree credits, \$154. (♦\$77)

Major literary works from the Middle Ages to the present; Icelandic Saga, H.C. Andersen fairy tales, drama by Strindberg, novels by Hamsun and J.V. Jensen, 20th-century Scandinavian novels. Readings in translation. (No prereq. May be applied toward the CLA second language requirement, Route II, for Danish, Finnish, Norwegian, and Swedish [see page 562])

Spring Qtr Sec 1 **Th**—6:20-8:50, FolH 203, Houe

Scan 3607 SCANDINAVIAN FILM: AN INTRODUCTION AND SURVEY. 4 degree credits, \$154 plus \$20 course fee. Total \$174. (♦\$77 plus \$20 course fee. Total \$97)

From origins to present; major filmmakers (Bergman, Dreyer, etc.) and trends; introduction to relevant theoretical and critical literature. (No prereq. May be applied toward the CLA second language requirement, Route II, for Danish, Finnish, Norwegian, and Swedish [see page 562])

Fall Qtr Sec 1 **W**—6:20-8:50, FolH 203, Mishler

SPRING QUARTER IN SWEDEN

Swedish in Växjö: Spring quarter in Växjö, Sweden, cosponsored by the Scandinavian Department and Extension Classes Office of Study Abroad. Intensive Swedish language instruction, culture courses, and field trips. May apply toward the CLA second language requirements (see page 562). (15 to 16 credits.) **For information:** call Extension Classes Office of Study Abroad at 376-5049.

Secondary Education (SeEd)

College of Education

(Department of Curriculum and Instruction)

Textbooks for most SeEd courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

Richard W. Beach, Associate Professor

Eugene D. Gennaro, Professor

Allen D. Glenn, Professor

Michael F. Graves, Professor

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Helen L. Jorstad, Associate Professor
Dale L. Lange, Professor
James D. Mackey, Professor
Gene L. Piché, Professor
Constance L. Walker, Assistant 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.

See page 24 for information regarding reopenings that may occur prior to the start of the term.

★**SeEd 5122 TEACHING CULTURE: THEORY AND APPLICATION.** 4 degree credits, \$189.

Analysis of the concept; related factors and materials for use in the classroom; culture shock; empathy; culture conflict, awareness, learning. **Must be taken A-N.** (Prereq postbaccalaureate or grad student. (Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Spring Qtr Sec 1 **MW**—4:15-5:30, PeikH 215, Walker

★**SeEd 5145 CLASSROOM MANAGEMENT.** 3 degree credits, \$Elem 5145, \$141.75.

For teachers, administrators, and support staff working in secondary school programs; focus on management of student behavior, of instruction as it relates to student behavior, and of teacher organizational tasks within the classroom. **Must be taken A-N.** (Prereq secondary tchg or admin experience or #. 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 **M**—4:15-6, PeikH 28, Bruning

★**SeEd 5150 ADVANCED METHODS OF TEACHING THE SOCIAL STUDIES.** 3 degree credits, \$141.75.

Advanced methods for social studies teachers; prerequisite to other graduate level courses in social studies education. **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 6 Extension students)

Fall Qtr Sec 1 **W**—4:15-6, PeikH 165, Glenn

★**SeEd 5152 TECHNIQUES OF INSTRUCTION IN SOCIAL STUDIES.** 3 degree credits, \$141.75.

Analysis of teaching strategies and contemporary curriculum materials in the social studies; techniques of instruction useful in inquiry; strategies of analysis; classroom behavior and evaluation; required of M.A., M.Ed., and Ph.D. candidates. **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 6 Extension students)

Spring Qtr Sec 1 **T**—4:15-6, PeikH 165, Mackey

★**SeEd 5153 NEW PERSPECTIVES IN THE SOCIAL STUDIES.** 1-3 cr (max 12 cr): This offering 3 degree credits, \$141.75.

Issues, materials, and instructional techniques related to current topics of particular relevance to social studies teachers. Focus sec 1: **Improving the Teaching of History.** **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at
(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Winter Qtr Sec 1 **T**—4:15-6, PeikH 165, Mackey

★**SeEd 5175 SECONDARY REMEDIAL READING INSTRUCTION.** 3 degree credits, \$141.75.

Principles and techniques for developing and conducting programs for secondary students seriously deficient in reading skills. **Must be taken A-N.** (Prereq 5344 or Elem 5331 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Winter Qtr Sec 1 **M**—4:15-6, PeikH 315, Graves

★**SeEd 5176 CLASSROOM RESEARCH IN ENGLISH EDUCATION AND READING.** 3 degree credits, \$141.75.

Review and analysis of current studies; design and analyses for school-based research. **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 6 Extension students)

Fall Qtr Sec 1 **TTh**—4:15-6, PtH 111, Graves

★**SeEd 5189 PLANNING AND ASSESSING SECOND LANGUAGE CURRICULUM.** 4 degree credits, \$189.

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. **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 6 Extension students)

Fall Qtr Sec 1 **TTh**—4:15-5:30, PeikH 215, Lange

★**SeEd 5194 ENGLISH LANGUAGE ARTS CURRICULA IN THE SECONDARY SCHOOL.** 3 degree credits, \$141.75.

Growth and development of English as a major school subject; description and evaluation of current curricular direction. **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 6 Extension students)

Fall Qtr Sec 1 **W**—4:15-6, PeikH 225, Piché

★**SeEd 5216 FOUNDATIONS OF BILINGUAL EDUCATION.** 4 degree credits, \$189.

Development of bilingual schooling in the U.S.: history, social and political impact, implications of congressional and judicial decisions related to language minority populations, current policy as it affects programs serving populations with limited proficiency in English. **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 6 Extension students)

Fall Qtr Sec 1 **MW**—4:15-5:30, PeikH 215, Walker

★**SeEd 5217 PROGRAMS AND CURRICULA IN BILINGUAL EDUCATION.** 4 degree credits, \$189.

Current curricular strategies utilized to instruct language minority students in the U.S. and selected international settings; analysis of styles by program and individual student learning goals; materials for instruction and content focusing on non-English

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

language curriculum; typologies and models of instructional programs; operational variables affecting curricular patterns and program goals. **Must be taken A-N.** (Prereq 5216 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Winter Qtr Sec 1 MW—4:15-5:30, PeikH 102, Walker

★**SeEd 5218 EVALUATION AND ASSESSMENT IN BILINGUAL EDUCATION.** 4 degree credits, \$189.

Social, political, and educational context; evaluation vs. research and implications for bilingual schooling, existing methods for assessment of language proficiency and academic achievement; studies and research with implications for curriculum development and materials selection. **Must be taken A-N.** (Prereq 5217 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Spring Qtr Sec 1 TTh—4:15-5:30, PeikH 102, Walker

★**SeEd 5320 LITERATURE FOR ADOLESCENTS.** 3 degree credits, \$141.75.

Reading and analysis of fiction and nonfiction; methods for critically assessing quality and appeal; appropriate for secondary English and social studies teachers and librarians. Meets alternate Saturdays beginning Jan. 12. **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 6 Extension students)

Winter Qtr Sec 1 Sa—9 a.m.-12, PeikH 225, Beach

★**SeEd 5321 TEACHING LITERATURE IN SECONDARY SCHOOLS.** 3 degree credits, \$141.75.

Current theory and methods of instruction; research and response to literature and reading; adolescent literature; growth assessment; curriculum design and evaluation. **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 6 Extension students)

Spring Qtr Sec 1 M—4:15-6, ChDev 105, Beach

★**SeEd 5322 TEACHING COMPOSITION AND COMMUNICATION IN JUNIOR AND SENIOR HIGH SCHOOLS.** 3 degree credits, \$141.75.

Contemporary directions in rhetorical theory and analysis of recent curriculum developments bearing on the teaching of oral and written composition. **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 6 Extension students)

Spring Qtr Sec 1 T—4:15-6, ChDev 105, Piché

★**SeEd 5326 TEACHING FILM AND TELEVISION.** 3 degree credits, \$141.75.

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. Meets alternate Saturdays beginning Apr. 6. **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 6 Extension students)

Spring Qtr Sec 1 Sa—9 a.m.-12, EddyHAn 64, Beach

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

★**SeEd 5340 TEACHING SPEECH AND FORENSICS IN SECONDARY SCHOOL.** 3 degree credits, \$141.75.

Methods for teaching speech and forensics in the high school classroom; attention to social framework of social communication; administration and instructional procedures in the high school forensic 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 6 Extension students)

Fall Qtr Sec 1 **F**—4:15-6, PeikH 165

★**SeEd 5344 TEACHING READING IN CONTENT AREAS.** 3 degree credits, \$141.75.

Methods of accommodating to student abilities and facilitating reading in regular content classes. **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 6 Extension students)

Fall Qtr Sec 1 **M**—4:15-6, PtH 111, Graves

Spring Qtr Sec 2 **W**—4:15-6, PtH 111, Graves

★**SeEd 5385 PLANNING AND ASSESSING SECOND LANGUAGE INSTRUCTION.** 4 degree credits, \$189.

Methods of teaching language as communication in oral and written modes; planning student interaction; classroom organization for learning and acquisition. Students plan and teach example lessons for analysis. **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 6 Extension students)

Winter Qtr Sec 1 **TTh**—4:15-5:30, PeikH 215, Lange

★**SeEd 5390 CURRENT DEVELOPMENTS IN SECONDARY SCHOOL SCIENCE TEACHING.** 3 degree credits, \$141.75.

Curricula, methods, materials of instruction, evaluation. **Must be taken A-N.** (Prereq 3356, 3357, or equivalent undergrad courses or experience in teaching science. 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 **Sa**—8:15 a.m.-11, PeikH 365, Gennaro

★**SeEd 5397 STUDIES IN SCIENCE EDUCATION.** 3 degree credits, \$8887, \$141.75.

Improvement of science teaching through application of research findings. **Must be taken A-N.** (Prereq MEd student, #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Spring Qtr Sec 1 **Sa**—8:15 a.m.-11, PeikH 365, Ahlgren

★**SeEd 5604 PERSPECTIVES ON LITERACY.** 3 degree credits, \$141.75.

Approach to the study of literacy from sociocultural and sociolinguistic perspectives, emphasizing the problematic status of traditional concepts of literacy and education for literacy. **Must be taken A-N.** (Prereq jr or sr or grad student. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 6 Extension students)

Spring Qtr Sec 1 **Th**—4:15-6, PeikH 315, Piché

Social and Behavioral Sciences

(See General College)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Social and Philosophical Foundations of Education (SPFE)

College of Education

(Department of Educational Policy and Administration)

Textbooks for most SPFE courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

A.L. Bagley, Professor

R.H. Beck, Regents Professor

S.M. Clark, Professor

M.L.L. Dobbert, Associate Professor

A.M. Harkins, Associate Professor

T.L. Mazzoni, Associate Professor

OSPFE 5101 HISTORICAL FOUNDATIONS OF MODERN EDUCATION. 3 degree credits, \$141.75.

Background course for all other courses in 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. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **M**—4:15-6, PeikH 252, Bagley

OSPFE 5102 EDUCATION IMAGERY IN EUROPE AND AMERICA. 3 degree credits, \$141.75.

Images and ideas of education expressed in the visual arts of western civilization (antiquity to 20th century) in relation to concurrent educational thought and practice; symbolism, myth, propaganda, didacticism, genre, caricature. **May be taken S-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **M**—4:15-6, PeikH 31, Bagley

OSPFE 5120 HISTORY OF CHILDHOOD EDUCATION. 3 degree credits, \$141.75.

Childhood education in western civilization; emphasis on images, symbols, ideas important to educational theory and practice in home and school. **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**—4:15-6, FolH 103, Bagley

★OSPFE 5131 COMPARATIVE EDUCATION. 3 degree credits, \$141.75.

European, Asiatic, and American systems and philosophies of education; possibilities of international education. **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 **W**—4:15-6, PeikH 37, Beck

OSPFE 5141 CRITICAL ISSUES IN CONTEMPORARY EDUCATION. 3 degree credits, \$141.75. (IS)

Introduces graduate students to ideas involved in current theory and practice. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **W**—4:15-6, PeikH 215, Bagley

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

OSPF 5155 HISTORY OF WESTERN EDUCATIONAL THOUGHT. 3 degree credits, \$141.75.

Examination of the major educational classics of western civilization; Plato, Aristotle, Cicero, Quintilian, Montaigne, Milton, Locke, Rousseau, and others. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **M**—4:15-6, ChDev 216, Bagley

OSPF 5156 HISTORY OF IDEAS IN AMERICAN EDUCATION. 3 degree credits, \$141.75.

Readings in American political, economic, and social development related to education; reference to the emerging system of public education. Recommended as background for SPFE 5170 but not a prerequisite. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **T**—4:15-6, PtH 215, Bagley

★OSPF 5171 ANTHROPOLOGY AND EDUCATION. 4 degree credits, \$Anth 5145, \$189.

Cross-cultural perspectives in examining educational patterns, the implicit and explicit cultural assumptions underlying them; methods and approaches to cross-cultural studies in education. **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)

Fall Qtr Sec 1 **Th**—3:15-5:30, ChDev 218, Dobbert

OSPF 5172 ANTHROPOLOGY OF AMERICAN EDUCATION. 3 degree credits, \$Anth 5144, \$141.75.

Application of anthropological principles to study of socialization, schooling, and cultural transmission in the United States; utility of anthropological concepts for the study of our own education systems and analysis of educational change. **May be taken S-N.** (Prereq Δ . Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **Th**—3:15-5:30, ChDev 216, Dobbert

OSPF 5174 FIELD METHOD FOR THE STUDY OF EDUCATION. 4 degree credits, \$Anth 5316, \$189.

Practice in aspects of field methodology below the level of full field study; detailed reading; analysis of studies in anthropology and education for methodological content. **May be taken S-N.** (Prereq 5171 or 5172 or Anth 5145 or 5144 or 5102. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **M**—3:15-5:30, PeikH 25, Dobbert

★OSPF 5175 INTRODUCTION TO SYSTEMS THEORY IN SOCIAL SCIENCE AND EDUCATION. 3 degree credits, \$141.75.

Fundamental aspects of general systems theory; readings; basic modeling techniques. **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)

Fall Qtr Sec 1 **W**—3:15-5:30, PeikH 252, Dobbert

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

OSPFE 5190 SOCIOLOGY OF EDUCATION. 4 degree credits, §Soc 5953, \$189.

Advanced studies in the social aspects of education, including the school as a socialization process, the social structure of education, the role of the school in social change. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Soc 5953. A joint Day/Extension class)

Fall Qtr Sec 1 T—3:15-5:30, BuH 120, Clark

★OSPFE 5202 POLITICS OF EDUCATION. 3 degree credits, §EdAd 5202, \$141.75.

Social science findings, concepts, and methods used to consider the political context of educational administration; emphasis on public school policymaking by local and state governments; role of administrators. **Must be taken A-N.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with EdAd 5202. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr Sec 1 T—4:15-6, ChDev 218, Mazzoni

Winter Qtr Sec 2 W—4:15-6, PtH 214, Mazzoni

★OSPFE 5209 EDUCATION IN FUTURE SOCIAL SYSTEMS. 3 degree credits, §5212, \$141.75.

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. **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 10 Extension students)

Fall Qtr Sec 1 T—6:30-8:30, PeikH 155, Harkins

★OSPFE 5210 SOCIAL FORECASTING AND EDUCATIONAL FUTURES. 3 degree credits, \$141.75.

Application of social sciences in their 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. **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 10 Extension students)

Winter Qtr Sec 1 T—4:15-6, PeikH 33, Harkins

★OSPFE 5211. SOCIAL DESIGN AND EDUCATIONAL FUTURES. 3 degree credits, \$141.75.

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. **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 10 Extension students)

Spring Qtr Sec 1 T—4:15-6, PtH 111, Harkins

Social Work (SW)

College of Home Economics

Textbooks for most SW courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

C. David Hollister, Director

Miriam Cohn, Professor of Social Work

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Jeff Edleson, Assistant Professor of Social Work

George Hoshino, Professor of Social Work

Noel Larson, Psychotherapist, Meta Resource Center, St. Paul; Clinical Assistant, Professor in Public Health

James W. Maddock, Adjunct Associate Professor, Family Social Science

Mary Ann Mattoon, Clinical Associate Professor in Psychology

Rama Pandey, Professor of Social Work

Jean Quam, Assistant Professor of Social Work

Robert Schwanke, Associate Professor in Health Education, School of Public Health

Annalee Stewart, Assistant Professor of Social Work

William R. Terrell, Adjunct Instructor, Health Education

THE MAJOR IN SOCIAL WELFARE.

The School of Social Work is now administratively located within the College of Home Economics. It had been located within CLA until July, 1983. The undergraduate degree programs offered by the School through CLA are being phased out, and no new majors are being accepted. Students interested in alternative majors or degree programs may contact Frances Guminga in the School of Social Work, 430 Ford Hall; 373-9786, or the Extension Counseling Office, 373-3905.

B.A. Major Sequence

Required Preparatory Courses

SW 1001, Psy 1001, CPsy 1301

One course each from any two of the following categories: (1) Anth 1102; (2) Soc 1001; (3) Econ 1001, 1014, 3001, 3002; (4) Pol 1001, 1027, 1031, 1041, 1051

Major Requirements

SW 1001, 3004, 3005, 3101, 3984

32 cr from the following areas (specific courses listed at undergraduate adviser's office): 1 course in racial and ethnic diversity, 1 in organization theory; remaining cr from communication; social problems; human growth, development, and change; social history; law and social policy.

You need not be majoring in Social Work 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 Social Work. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

SW 1001 INTRODUCTION TO SOCIAL WELFARE AND COMMUNITY SERVICES. 5 degree credits, \$185. (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 T—6:20-8:50, FordH 60

*SW 3004 SOCIAL WORK ISSUES AND HUMAN DEVELOPMENT THROUGH THE LIFE CYCLE. 4 degree credits, \$5201, \$196.

Normative development for social, psychological, biological, and cultural perspectives. Integration of theoretical concepts with practice issues. (Prereq junior or senior standing, 1001, CPsy 1301. Limited to 45)

Fall Qtr Sec 1 Th—6:20-8:50, FordH 130

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

SW 3005 SOCIAL WORK PROCESSES: METHODS OF INTERVENTION. 4 degree credits, \$5401, \$196.

The function of values and knowledge in social work practice; the meaning of giving and receiving help; the process in intervention; some social work principles. (Prereq junior or senior, 1001, 3004)

Winter Qtr Sec 1 **Th**—6:20-8:50, FordH 285, Stewart

SW 3101 SOCIAL WELFARE: A FRAMEWORK FOR ANALYSIS. 4 degree credits, \$5101, \$196.

Historical development, legislative enactments, administrative policy, and program structure under which federal, state, and local governmental programs of income maintenance, medical care, and public housing operate. (Prereq junior or senior)

Spring Qtr Sec 1 **T**—6:20-8:50, FordH 170, Pandey

★SW 3984 INTRODUCTION TO COMMUNITY DEVELOPMENT. 4 degree credits, \$196.

Trends, pace, and dynamics that dominate urban communities; strategies used to achieve neighborhood goals; factors that control and influence change in planning; action on the community level. (Prereq 1001 or #. Limited to 75)

Winter Qtr Sec 1 **W**—6:20-8:50, FordH 115, Hollister

★SW 5010 SEMINAR: SPECIAL TOPICS—THE ANALYTICAL PSYCHOLOGY OF C.G. JUNG. 4 degree credits, \$Psy 5105, \$196.

Major Jungian psychological theories: extroversion-introversion, function types, complexes, ego, persona, shadow, animus, anima, self, personal and collective unconscious, symbolism, psychotherapy. Relevant empirical research and clinical material. *Those who wish to register for no credit should see Psy 5105.* (Prereq 3101 or 5101 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Psy 5105. Limited to a combined total of 109)

Winter Qtr Sec 1 **W**—6:20-8:50, NichH 213, Mattoon

★OSW 5013 INTERDISCIPLINARY TEAM TRAINING IN HEALTH SERVICES DELIVERY. 3 degree credits, \$PubH 5003, 5013, \$147.

Interdisciplinary team development with application to public health, human service projects, didactic content, experiential methods, activities to develop attitudes, skills essential to effective team goal setting, decision making, problem-solving, and task accomplishment. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with PubH 5013, HSU 5001. A joint Day/Extension class limited to 6 Extension students from health and helping professions)

Winter Qtr Sec 1 **W**—6:10-9:10, MoosT 2-571, Schwanke, Cohn

OSW 5021 HUMAN SEXUALITY FOR HEALTH AND HELPING PROFESSIONALS I. 3 or 4 credits, \$HSU 5025, \$PubH 5021, \$147 or \$196.

Multidisciplinary approach to human sexuality from the perspective of public and social health and well being of the community, society, and individuals. Develops personal skills for imparting sexual knowledge to other health professionals and consumers. For 3 credits, complete regular course grading requirements. For 4 credits, do the above *plus* attend a 13-hour Sexual Attitude Reassessment workshop scheduled Oct. 26 and 27. (Prereq Health Sciences, or in a graduate program in

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Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Public Health, Family Social Science, Social Work, Education, or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with PubH 5021, HSU 5025. A joint Day/Extension class for Extension students from health and helping professionals and educators)

Fall Qtr Sec 1 **Th**—5:15-7:30, MoosT 2-620, Larson, Terrell

OSW 5022 HUMAN SEXUALITY FOR HEALTH AND HELPING PROFESSIONALS II. 3 degree credits, \$PubH 5022, \$147.

Examines rationales for sexual health care and methods of intervention into sex-related problems. Focus on methods of assessment, creation of comfortable climate for exploration of sexual concerns, providing sex-related information, techniques for behavior change, and making referrals to specialized resources for treatment. (Prereq 5021 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with HSU 5027, PubH 5022. A joint Day/Extension class for Extension students from Health Sciences, Public Health, Social Work, or a graduate program of Family Social Science or Education)

Winter Qtr Sec 1 **Th**—5:15-7:30, MoosT 2-620, Maddock, Larson

OSW 5023 HUMAN SEXUALITY FOR HEALTH AND HELPING PROFESSIONALS III. 3 degree credits, \$HSU 5028, \$PubH 5023, \$147.

Issues of health policy, preventive education in human sexuality. Policy-making process and current controversial sexual issues. Discussion of sexual normalcy, variance/deviance; ethical and legal considerations; public policies on sexual minorities; institutional policies on sexual health care; sex education programs for children and adults. (Prereq 5021 or #. Meets concurrently with HSU 5028, PubH 5023. A joint Day/Extension class)

Spring Qtr Sec 1 **Th**—5:15-7:30, MoosT 2-690, Terrell, Maddock

OSW 5024 MULTIDISCIPLINARY PERSPECTIVES ON AGING. 4 degree credits, \$Educ 5440, \$CPsy 5305, \$HSU 5009, \$PA 5671, \$Soc 5960, \$196.

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. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Educ 5440, HSU 5009, Phar 5009, PA 5660, Soc 5960. A joint Day/Extension class)

Fall Qtr Sec 1 **MW**—4:15-6, MoosT 2-620, Cohn

See also Television Course, SW 5010, Multidisciplinary Perspectives on Aging, page 551.

SW 5111 CONTEMPORARY POLICY AND PROGRAMS IN SOCIAL WELFARE. 3 degree credits for graduate students, \$147; 4 degree credits for undergraduates, \$196.

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 sciences. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **M**—7-10, FordH 175

SW 5211 ADVANCED THEORIES OF HUMAN GROWTH AND CHANGE. 3 degree credits for graduate students, \$147; 4 degree credits for undergraduates, \$196.

Socio-psycho-biological factors associated with individual and group development as applied to social work practice. (Prereq grad standing or 12 cr in social sciences. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **M**—7-10, FordH 447, Quam

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

SW 5414 FUNDAMENTALS OF SOCIAL GROUP WORK. 3 degree credits, \$8414, \$147.

Analysis of basic principles of social group work practice applicable to both task and treatment groups. The small group as a social process to achieve task and treatment goals. Sociophilosophic 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, individual members, and with systems external to small group. (Prereq 3005, sr or grad major in social work. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 T—7-10, FordH 170, Edleson

See also **Television Course, SW 8203, Family Stress and Coping, page 551.**

Social Work, Continuing Education in

Textbooks for most classes are available at the bookstore in Williamson Hall (373-3688)

(See also Adult Psychiatry, Early Childhood Studies, Family Social Science, Foster Care Education Certificate [see the Degrees and Certificates section of this Bulletin]; General College; and Youth Studies)

Mark Anderson, Chaplain, Metropolitan Medical Center, Minneapolis

Shirley Campbell, Psychotherapist, Private Practice, St. Paul

John Clarke, Licensed Psychologist, Principal Psychiatric Social Worker and Family Therapy Coordinator, Hennepin County Mental Health Center, Minneapolis

Noel Larson, Psychotherapist, META Resources, St. Paul

Richard Obershaw, Director, Burnsville Counseling Clinic, Burnsville

Joyce Portner, Program Director, Continuing Education in Social Work, and Marriage and Family Therapist, Family Consultation Center, Burnsville

Vicki Underland-Rosow, Psychotherapist, Private Practice, Minneapolis

Shirley Zimmerman, Assistant Director, Continuing Education in Social Work and Associate Professor, Family Social Science

The Department of Continuing Education in Social Work (CESW) offers the following program, which is designed to enhance professional practice at all levels. These specialty and refresher courses represent diversity by design, and reflect needs brought to our attention by persons in social work and related fields.

Although most courses require no prerequisites and are not arranged sequentially, a student may package offerings to constitute a coherent program applicable to agency and/or individual needs, both short and long term. Consultation is readily available through department staff. All courses carry certificate credit and are recorded on a transcript available at the University's Admissions and Records Office. Certificate credits may be accepted as meeting degree requirements at the discretion of other colleges and universities.

Some courses may require a degree and/or current employment in a human service agency as indicated by individual course descriptions. However, special consideration will be given to those with volunteer experience who may not have a degree and/or those who wish to explore or pursue an interest in social work and the social service system. Such prospective students are encouraged to contact the Department of Continuing Education in Social Work.

For the CESW brochure, listing possible additions and/or changes in program, please write to: Continuing Education in Social Work, 107 Armory, 15 Church St. S.E., Minneapolis 55455; or call (612) 373-5831.

SW 0217C DYNAMICS OF DEATH, DYING, AND GRIEF COUNSELING. 3 certificate credits, \$111.

Designed for those professionals whose work brings them into close contact with death, dying, and grief. The course explores the student's sensitivity and self-

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Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

awareness concerning these topics along with an investigation of how death, dying, and grief are viewed in our society today. Particular attention is paid to the dynamics of loss and reactions to loss. Loss and grief therapy, children and death, problems of dying, support groups for the bereaved, the funeral as therapy, major myths of grief, and other pertinent death topics are examined and discussed. Counseling emphasis is on grief and bereavement. (No prereq)

Fall Qtr Sec 1 **M**—6:30-9, FordH 130, Obershaw

SW 0218C PROCESS THERAPY: A FEMINIST APPROACH TO MENTAL HEALTH. 3 certificate credits, \$111.

Process Therapy, or "living in process," as developed by Anne Wilson Schaefer, which includes the intellectual, emotional, and physical and spiritual aspects of living, is the focus of the course. Unlike most other therapies, process therapy goes beyond "return to function" to deal with health rather than illness. Major issues to be considered include the constraining influence of addictive systems on personal lives and relationships, the powerlessness illusion of control paradox, dualistic thinking, the power of naming, and right and left brain shifts. Class members are expected to examine their own philosophy of life rather than focus on learning new techniques. (No prereq)

Fall Qtr Sec 1 **Th**—6:30-9, FordH 160, Underland-Rosow

SW 0516C MARRIAGE AND FAMILY THERAPY: PURPOSES, PRINCIPLES, AND PROCESS. 3 certificate credits, \$111.

Intended for human service professionals who do or intend to do marriage and family therapy. Approaches appropriate to family therapy such as systems (strategic, structural) and communications are presented together with affective, cognitive, and behavioral modes of treatment. Topics covered include the process of change in relationships; modes of intervention; diagnostic assessment and differential intervention; and similarities and differences in working with the whole family, family subgroups, marriage partners, and individuals. Counseling issues such as divorce, step-family processes, and sexuality problems also are examined. The aim of the course is to help participants apply principles and techniques related to each approach and thus enhance their counseling practice. (No prereq)

Spring Qtr Sec 1 **M**—6-8:30, FordH 170, Portner

SW 0517C FAMILY TREATMENT AND MENTAL DISORDERS. 3 certificate credits, \$111.

A review of major mental disorders and how marital/family treatment can assist in ameliorating their effects on families and individual family members. Some of the disorders to be examined in relation to family treatment include schizophrenia, substance abuse, depressive disorders, anxiety disorders, and personality disorders. The focus of the course is on practical assessment and family treatment strategies to enable families to cope more effectively in situations involving a member with a mental disorder. Primarily oriented to family clinicians and others without extensive experience in working in a psychiatric setting or in working with families having a member who is mentally disordered. (No prereq)

Spring Qtr Sec 1 **T**—6:30-9, FordH 175, Clarke

SW 0519C CRISIS INTERVENTION AND EMERGENCY PSYCHOTHERAPY. 3 certificate credits, \$111.

An examination of several different approaches to crisis intervention having a problem-solving focus: Aguilera and Messick, Ewing, Everstine and Everstine, and others. Emergency psychotherapy from the point of view of Bellak and others also is

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Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

included as well as evaluation and assessment procedures for the provision of appropriate information and referral in crisis and emergency situations. Students are expected to contribute relevant case material for discussion and learning purposes. (No prereq)

Fall Qtr Sec 1 **W**—6:30-9, FordH 175, Campbell

SW 0534C INCEST: A FAMILY APPROACH TO TREATMENT. 3 certificate credits, \$111.

Designed for social workers, physicians, nurses, psychologists, and chemical dependency counselors, the course compares and contrasts the two major approaches to incest intervention: family systems and victim advocacy. The focus of the course is on treatment approaches and related clinical skills based on models which integrate psycho-dynamic and family systems theories. Client populations addressed include child and adolescent victims and their families and adults victimized as children. Video tapes and skill building exercises facilitate therapy skill development. (No prereq)

Spring Qtr Sec 1 **Th**—5:15-7:45, FordH 175, Larson

Sociology (Soc)

College of Liberal Arts

Textbooks for most Soc courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450)

(See also General College courses in social and behavioral sciences; and Informal Courses)

John Clark, Professor of Sociology

Shirley Clark, Professor of Education, Associate in Sociology

David Cooperman, Professor of Sociology

Bert Ellenbogen, Professor of Sociology

Lucy Rose Fischer, Assistant Professor of Sociology

Joel Nelson, Professor of Sociology

Joel Samaha, Professor of History, Associate in Sociology

Stephan Spitzer, Associate Professor of Sociology

A MAJOR IN SOCIOLOGY CAN BE COMPLETED IN THE EVENING.

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

B.A. Major Sequence, General Option

Major Requirements

1001, 3201, 3401 or 3201H, 3401H

3801, 3802, 3803 (should be taken soph yr)

A theory course from 5701, 5703, 5705, 5711

16 additional 3000- or 5000-level sociology cr

Major Requirements for Sociology of Law, Criminology, and Deviance Option For the B.A. Degree:

1001, 3201 or 3201H, 3401 or 3401H

3801 and one from 3802 or 3803 (should be taken as soon as possible)

5701 or 5703 or 5705 or 5711

3101, 3102

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Three courses chosen from 5101, 5102, 5104, 5105, 5107, 5108, 5111, 5114, 5125, 5135, 5141, 5142, 5147, 5148, 5161, 5162

Free elective: at least one 3000 or 5000-level course from an alternative sociological perspective (4-5 cr)

B.S. Major Sequence

Required Preparatory Course: 1001

Major Requirements

3801, 3802, 3803, 3201, 3401

One of the following: 5701, 5703, 5705, 5711

16 credits of 3000- or 5000-level sociology electives

6-8 credits of required research design in sociology

27 credits from list of required supportive field courses, including a two-quarter sequence (minimum 8 credits) in one area (list available from Extension Counseling or the Sociology Department)

Students must submit a program proposal for approval to the Sociology Undergraduate Affairs Committee at least two quarters prior to graduation.

Registration in all major requirements including supportive must be A-N unless the course is only offered S-N. Students must maintain a C average in sociology courses, and receive at least a C in the supportive courses.

Students are advised to register early in their academic careers for 3801, 3802, and 3803.

The Department of Sociology offers an honors degree through the Honors Division of CLA. For more information, students should inquire in the Honors Program Office, 115 Johnston Hall, 373-5116. Honors sections of 1001(H), 3201(H), 3401(H), 3801(H), 3802(H), 3803(H), and 3501(H) are offered only through day school, however.

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

A minor in Sociology is also available. Interested students should call Extension Counseling, 373-3905.

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Sociology. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

Soc 1001 INTRODUCTION TO SOCIOLOGY. 4 degree credits, \$148. (♦\$74) (IS)

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 **W**—6:20-8:50, AndH 330, Spitzer
 Sec 2 **Th**—6:20-8:50, AndH 230, Nelson
 Sec 3 **Sa**—9 a.m.-11:30, BlegH 130

Winter Qtr Sec 4 **T**—6:20-8:50, BlegH 235
 Sec 5 **Th**—6:20-8:50, BlegH 215, Nelson

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Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

- Spring Qtr** Sec 6 **M**—6:20-8:50, AndH 310
 ★Sec 7 **W**—6:20-8:50, Robbinsdale/Armstrong HS,
 Plymouth (Limit 30)
 Sec 8 **Th**—6:20-8:50, BlegH 150, Nelson

Soc 3101 (formerly CJS 3101) INTRODUCTION TO AMERICAN CRIMINAL JUSTICE. 4 degree credits, \$154. (◆\$77)

Components and dynamics of the criminal justice system as well as its philosophical underpinnings. (No prereq)

- Winter Qtr** Sec 1 **M**—6:20-8:50, AndH 370

Soc 3102 INTRODUCTION TO CRIMINAL BEHAVIOR AND SOCIAL CONTROL. 4 degree credits, \$154. (◆\$77) (IS)

Introduction to the basic issues in criminology and the sociology of law and social control organizations. (Prereq 3101 or equivalent)

- Spring Qtr** Sec 1 **Th**—6:20-8:50, Mgmt/Econ 130

Soc 3201 PRINCIPLES OF SOCIAL PSYCHOLOGY. 5 degree credits, \$3506, \$192.50. (◆\$96.25)

Ideas and findings related to social psychology; experience in developing empirically based knowledge in social science. (Prereq 1001 or equivalent)

- Spring Qtr** Sec 1 **W**—Lect, 6-8:30, BlegH 440, Spitzer
W—Lab, 8:30-9:15, BlegH 150

Soc 3214 UNDERSTANDING EVERYDAY LIFE. 4 degree credits, \$154. (◆\$77)

Behaviors (activities, personal associations), orientations (values, attitudes, beliefs), and personal interpretations of "typical" individuals; their relationship to social characteristics; the effects of transitions—anticipated (e.g., educational/occupational choice, marriage) and unexpected (e.g., unemployment, illness). (Prereq soph)

- Winter Qtr** Sec 1 **W**—6:20-8:50, AndH 350

Soc 3315 (formerly 5315) LATIN AMERICAN SOCIETIES IN TRANSITION. 4 degree credits, \$154. (◆\$77)

Relationship of population, technology, and organization structure to levels of modernization among Latin American nations. Differentiation, diffusion, innovation, and social conflict as precipitants of social change. (Prereq 8 cr in sociology, economics, anthropology or political science or #. May be applied toward the CLA second language requirement, Route II, for Spanish and Portuguese [see page 562])

- Spring Qtr** Sec 1 **M**—6:20-8:50, RarigC 610

Soc 3401 PRINCIPLES OF SOCIAL ORGANIZATION. 5 degree credits, \$3505, \$192.50.

As a basic course for sociology majors, the content addresses sociology's fundamental question: how and why is social organization possible? Although the specific course content will vary by instructor, the course will review the major concepts and theories of social structure, and discuss the primary forms of social organization (groups, communities, networks, formal organizations), basic social processes (integration, differentiation, regulation, and change), and how social organization evolves from individual decision-making. (Prereq 1001, 3801 or equivalent)

- Fall Qtr** Sec 1 **W**—Lect, 6-8:30, Mgmt/Econ 160
W—Lab, 8:30-9:15, Mgmt/Econ 160

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Soc 3501 THE FAMILY SYSTEM. 4 degree credits, \$154. (◆\$77) (IS)

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 #)

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

Soc 3503 SEX, ROMANCE AND RELATIONSHIPS. 4 degree credits, \$154. (◆\$77)

Sociological perspectives on sexual socialization; ideas of masculinity and femininity; history and functions of love and romance; characteristics of romantic relationships, intimacy, emotionality, sexuality, exclusivity; investigation of sexual deviance in relation to sexual norms. (Prereq 1001)

Winter Qtr Sec 1 **W**—6:20-8:50, BlegH 135

Soc 3551 WORLD POPULATION PROBLEMS. 4 degree credits, \$154. (◆\$77) (IS)

Population growth and natural resources, population dynamics, fertility and mortality in less developed nations, population forecasts, population policies to reduce fertility. (No prereq)

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

Soc 3601 URBAN COMMUNITY. 4 degree credits, \$154. (◆\$77)

Urban community patterns. Comparison of social interaction in neighborhood, city, and metropolis. Community studies. Urban power structures. Settlement patterns, organization of social life and urban problems. (Prereq 1001 or 1002)

Fall Qtr Sec 1 **M**—6:20-8:50, Mgmt/Econ 160, Cooperman

Soc 3801 SOCIOLOGICAL METHODS I: DESCRIPTIVE STATISTICS. 5 degree credits. Offered alternate years. Tentatively scheduled for Fall, 1985.**Soc 3802 SOCIOLOGICAL METHODS II: STATISTICAL INFERENCE.** 5 degree credits. Offered alternate years. Tentatively scheduled for Winter, 1986.**Soc 3803 SOCIOLOGICAL METHODS III: RESEARCH METHODS.** 5 degree credits. Offered alternate years. Tentatively scheduled for Spring, 1986.**Soc 3937 SOCIAL GERONTOLOGY: ELDERS IN AMERICAN SOCIETY.** 4 degree credits, \$154. (◆\$77)

Survey of situations and problems facing aging people in modern societies. A first course on aspects of human aging from a sociological perspective. (Prereq 1001 or #)

Winter Qtr Sec 1 **M**—6:20-8:50, BlegH 360

(See the Aging Studies Certificate listed with General College in this Bulletin)

Soc 3960 TOPICS IN SOCIOLOGY: SOCIAL PROBLEMS AND INTIMATE RELATIONSHIPS. 4 degree credits, \$154.

The relationship between social problems and intimates. Among the social problems to be covered are sexual assault (including incest), battering, and alcoholism. (Prereq 1001 or 1002 or equivalent or #)

Fall Qtr Sec 1 **T**—6:20-8:50, AndH 210, Asher

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Soc 5105 CONTEMPORARY CORRECTIONS. 4 degree credits, \$154. (◆\$77)

Advanced study of correctional organizations such as prisons and jails; probation and parole, department and community corrections. Penal policies and practices in the United States compared with advanced penal systems in other countries. (Prereq 3101, 3102 or #...5161, 5162 recommended)

Winter Qtr Sec 1 **T**—6:20-8:50, BlegH 135

Soc 5125 POLICING IN AMERICAN SOCIETY. 4 degree credits, \$154. (◆\$77)

Police organizations and operations from a social science perspective. Formal and informal policing; role and functions; legal bases; accountability and restraints; relations with policed populations, emphasizing minorities, youth, and recognized violators; use of violence; unethical and illegal practices; civil liberties; intraorganizational and interorganizational relations; social theory and change. (Prereq 3101, 3102 or #...5161, 5162 recommended)

Fall Qtr Sec 1 **Th**—6:20-8:50, BlegH 215

OSoc 5135 WHITE COLLAR CRIME. 4 degree credits, \$154.

Types of white-collar crime, broadly construed; roots in American society; responses offered by theoreticians and amateur and professional politicians. (Prereq 3101, 3102 or #...5161, 5162 recommended. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **TTh**—4:30-6, BlegH 420, J Clark

Soc 5161 CRIMINAL LAW (formerly CJS 5101). 4 degree credits, \$CJS 5101, \$154. (◆\$77)

An examination of the purposes and basic principles of criminal law; the proper limits of the criminal sanction and suggested reforms in existing criminal law. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **T**—6:20-8:50, Law 1, Samaha

Soc 5162 CRIMINAL PROCEDURE (formerly CJS 5102). 4 degree credits, \$CJS 5102, \$154. (◆\$77)

An examination and assessment of the power of the state to intrude into the lives of citizens and deprive them of life, liberty, and property in order to enforce the criminal law. Powers such as arrest, search, and seizure, pre-trial practices, and prisoners' rights are evaluated. Suggested limits on discretionary power of police, prosecutors, judges, and corrections authorities. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **T**—6:20-8:50, BlegH 335, Samaha

Soc 5201 INTRODUCTION TO SOCIAL PSYCHOLOGY. 4 degree credits, \$154. (◆\$77) (IS)

Research and theory regarding relation of individual social groups. Socialization processes; effects of social interaction and isolation; individual behavior under conditions of social organization and disorganization; cultural influence and its limits. **No credit for sociology majors.** (Prereq 8 cr in sociology, anthropology, psychology, political science or economics. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Th**—6:20-8:50, BlegH 360

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Soc 5401 INTRODUCTION TO SOCIAL ORGANIZATION. 4 degree credits, \$154.
(◆\$77)

Theories of social structure, social stratification, community structure, status groups, the nature of social power, social control processes, aspects of formal organizations, and rational actor models for decentralized social processes. **No credit for sociology majors.** (Prereq 8 cr in sociology, anthropology, psychology, political science, or economics. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—6:20-8:50, SocSci 307

OSoc 5505 FAMILY DEVELOPMENT. 5 degree credits, \$192.50.

The natural history of families—how they form, function, and achieve distinctive identities. Developmental growth of children and parents in interaction in seven stages of the family life cycle, from engagement planning to family dissolution. (Prereq 1001, 3201 or 5201 or equivalent, CPsy 1301 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Winter Qtr Sec 1 **MW**—3-5, BlegH 120, Fischer

OSoc 5675 WORLD FOOD SUPPLY PROBLEMS. 3 degree credits, \$AgEc 5790, \$FScN 5643, \$PIPa 5220, \$LACS 5280, \$115.50.

Multidisciplinary approach to social, economic, and technical problems of leading the world's growing population. Principles sought from the social and economic sciences. Principles from the plant, animal, and nutritional sciences and their application to food problems. (Prereq major in agriculture, veterinary medicine, nutritional sciences, social science field or #. Qualified students may register for graduate credit at the University of Minnesota with written # only. Meets concurrently with FScN 5643. A joint Day/Extension class)

Fall Qtr Sec 1 **W**—6-9, ClaOff B35, StP Campus, Ellenbogen

Soc 5705 BACKGROUND OF MODERN SOCIAL THOUGHT. 4 degree credits, \$154.
(◆\$77)

Major trends of social thought from Renaissance to 19th century; origins of sociology. (Prereq 8 cr social science or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **M**—6:20-8:50, Mgmt/Econ 130, Cooperman

OSoc 5953 SOCIOLOGY OF EDUCATION. 4 degree credits, \$SPFE 5190, \$154.

Advanced studies. School as socialization process, social structure of education, role of school in social change, other areas. Theory and empirical research. (Prereq 1001 or equivalent or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with SPFE 5190. A joint Day/Extension class)

Fall Qtr Sec 1 **T**—3:15-5:30, BuH 120, Clark

OSoc 5958 SOCIOLOGY OF HIGHER EDUCATION. 4 degree credits, \$SPFE 5192, \$154.

Social aspects of higher education; socialization of students, comparative institutional organization, role structure, others. Theory and empirical research. (Prereq 1001 or equivalent 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, ChDev 216, Clark

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

OSoc 5960 MULTIDISCIPLINARY PERSPECTIVES ON AGING. 4 degree credits, \$CPsy 5305, Educ 5440, HSU 5009, PA 5671, SW 5024, \$154.

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 department of their choice as noted. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Educ 5440, Phar 5009, PA 5660, HSU 5009, SW 5024. A joint Day/Extension class)

Fall Qtr Sec 1 **MW**—4:15-6, MoosT 2-620, Fischer

Soc 5960 is also offered as a Television Course. See page 551.

Soil Science (Soil)

College of Agriculture

Textbooks for most Soil courses are available at Books Underground on the St. Paul campus (373-0800)

(See also Horticulture; and IC 0541 Soil Pollution and Public Policy)

Terence Cooper, Associate Professor of Soil Science

★Soil 1122 INTRODUCTORY SOIL SCIENCE. 4 degree credits, \$5022, \$148.

Basic physical, chemical and microbiological properties of soil. Soil genesis, classification, and principles of soil fertility. Lectures and laboratory. (Prereq Chem 1001 or 1004 or equivalent. Meets concurrently with 5022. Limited to 18)

Fall Qtr Sec 1 **TTh**—6:20-9:20, Soils 215, 130, StP Campus, Cooper

OSoil 3118 SEMINAR: SOIL POLLUTION AND PUBLIC POLICY. 1 degree credit, \$48.50.

Round table discussions of assigned readings in the subject matter. **Must be taken S-N.** (No prereq. Meets concurrently with IC 0541. A joint Day/Extension class)

Fall Qtr Sec 1 **T**—6:30-8:30, PalmC 10, StP Campus, Adams

★Soil 5022 INTRODUCTORY SOIL SCIENCE FOR TEACHERS. 4 degree credits, \$1122, \$194.

See description for Soil 1122. (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 1122. Limited to 10)

Fall Qtr Sec 1 **TTh**—6:20-9:20, So 215, 130, StP Campus, Cooper

South and Southwest Asian Studies

(See Middle Eastern and South Asian Studies)

SPAN

(See Student Project for Amity Among Nations)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Spanish and Portuguese

College of Liberal Arts

Textbooks for most Span and Port courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

(See also IC 0581, Spanish for Travelers; IC 0602, The Ancient and Modern Maya; and IC 0926, The Natural History and Culture of Peru)

Marilyn M. Cuneo, Instructor in Spanish

Robert Estelle, Assistant Professor of Spanish

Russell Hamilton, Professor of Portuguese

René Jara, Professor of Spanish

Ruth E. Jones, Associate Professor of Spanish

Arturo Madrid, Professor of Spanish

Lawrence Mantini, Associate Professor of Spanish

Ricardo Narváez, Professor of Spanish

Antonio Ramos, Professor of Spanish

Ileana Rodríguez, Associate Professor of Spanish

Ronald Sousa, Professor of Spanish and Portuguese

Nicholas Spadaccini, Professor of Spanish

Constance Sullivan, Associate Professor of Spanish

Hernán Vidal, Professor of Spanish

Anthony N. Zahareas, Professor of Spanish

Spanish (Span)

There are two sequences of courses in beginning Spanish from which the prospective student may select the one best suited to his needs. Within the 1101-1103 sequence, one group of courses meets for two hours twice a week, and the other is an intensive session which meets for four hours once a week. Students may select the appropriate section depending on their weekly schedule.

Span 1101-1102-1103 BEGINNING SPOKEN SPANISH: ORAL APPROACH, carrying 5 degree credits per unit, comprises the standard course in first-year Spanish. The principal aim of the course is to teach the student to understand and speak Standard Spanish so that he can communicate in Spain, Spanish America and among U.S. Spanish-speaking minority groups. As the student progresses through the 1101-1103 sequence more emphasis will be placed each quarter on reading and writing, in that order. This sequence is recommended for those planning to travel in Spanish-speaking nations, to continue the study of Spanish or to satisfy college language requirements.

BEGINNING SPANISH: MODIFIED ORAL APPROACH, Span 1201-1202-1203-1204-1205, carrying 3 degree credits per unit. This sequence is recommended for those who desire a general introduction to the language, but who wish to proceed at a slower pace than required for the standard 5-credit units. Students wishing further Spanish after completing 1205, register for 1104.

Read about language laboratories fees on page 56.

The following nonlanguage courses may be applied toward the CLA second language requirement, Route II for Spanish (see page 562): Geog 3131; Hist 3425; Soc 3315; Span 1503, 3601, 3602, 3614, 3615.

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 376-3000 two weeks before mail registration for that quarter begins.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★Span 1101-1102-1103 **BEGINNING SPOKEN SPANISH: ORAL APPROACH. 5 degree credits each quarter, \$185 each quarter. (IS)**

Intensive work in understanding and speaking Spanish. See note above. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103. Limited to 27)

- Fall Qtr 1101** Sec 1 **TTh**—6:10-8:15, FolH 204
Sec 2 **TTh**—6:10-8:15, FolH 209
Sec 3 **TTh**—6:10-8:15, KoltH S136
Sec 4 **TTh**—6:10-8:15, KoltH S137 (Limit 108)
Sec 5 **W**—6:10-10:05, FolH 105
Sec 6 **W**—6:10-10:05, FolH 110
Sec 7 **W**—6:10-10:05, FolH 303
Sec 8 **W**—6:10-10:05, KoltH S137 (Limit 108)
- Winter Qtr 1101** Sec 9 **T**—6:10-10:05, FolH 107
Sec 10 **T**—6:10-10:05, FolH 204 (Limit 54)
- 1102** Sec 11 **TTh**—6:10-8:15, FolH 50
Sec 12 **TTh**—6:10-8:15, FolH 203 (Limit 81)
Sec 13 **W**—6:10-10:05, FolH 107
Sec 14 **W**—6:10-10:05, FolH 105 (Limit 81)
- Spring Qtr 1102** Sec 15 **T**—6:10-10:05, FolH 110
Sec 16 **T**—6:10-10:05, FolH 203 (Limit 54)
- 1103** Sec 17 **TTh**—6:10-8:15, FolH 104
Sec 18 **TTh**—6:10-8:15, FolH 105 (Limit 81)
Sec 19 **W**—6:10-10:05, FolH 110
Sec 20 **W**—6:10-10:05, FolH 305 (Limit 81)

★Span 1104 **INTERMEDIATE SPANISH, ORAL APPROACH: INTERPRETATION OF MODERN PROBLEMS. 4 degree credits, \$148. (IS)**

Intensive review of the spoken language, coupled with continued development of reading, comprehension and writing skills, with an emphasis on active use of readings dealing with modern social and cultural problems in Spain and Spanish America to build vocabulary and to model compositions. (Prereq 1103 or 1205 or #. Limited to 27)

- Fall Qtr** Sec 1 **Th**—6:10-9:30, FolH 302
Sec 2 **Th**—6:10-9:30, FolH 307

- Spring Qtr** Sec 3 **T**—6:10-9:30, FolH 209

★Span 1105 **INTERMEDIATE SPANISH, ORAL APPROACH: DISCUSSIONS OF MODERN LITERATURE AND THE PRESS. 4 degree credits, \$148. (IS)**

Intensive advanced review of the spoken language, coupled with continued development of reading, comprehension and writing skills, with an emphasis on active use of readings from modern Spanish and Spanish-American literature and the press. (Prereq 1104 or #. Limited to 27)

- Fall Qtr** Sec 1 **Th**—6:10-9:30, KoltH S135

- Winter Qtr** Sec 2 **Th**—6:10-9:30, FolH 104
Sec 3 **Th**—6:10-9:30, FolH 110

Span 1201-1202-1203-1204-1205 BEGINNING SPANISH: MODIFIED ORAL APPROACH. 3 degree credits each quarter, \$111 each quarter.

Comprehension, speaking, reading and practice in pronunciation. See note above (continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

for details of this modified course. (No prereq for 1201; 1201 or # for 1202; 1202 or # for 1203; 1203 or # for 1204; 1204 or # for 1205)

Fall Qtr 1201 ★Sec 1 T—6:10-8:40, LindH 302 (Limit 25)

★Sec 2 T—6:10-8:40, FolH 306 (Limit 25)

1204 Sec 3 T—6:10-8:40, FolH 304

Winter Qtr 1202 Sec 4 T—6:10-8:40, FolH 304

1205 Sec 5 T—6:10-8:40, FolH 406

Spring Qtr 1203 Sec 6 T—6:10-8:40, FolH 305

Span 1503 CULTURE, CIVILIZATION OF MODERN LATIN AMERICA: SOCIETIES IN CHANGE. 4 degree credits, \$148. (◆\$74)

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 be applied toward the CLA second language requirement, Route II, for Spanish and Portuguese [see page 562]. **May not be used for Spanish or Portuguese major credit**)

Winter Qtr Sec 1 M—6:10-9:30, FolH 205

Span 3002 READING FOR SPEED AND COMPREHENSION. 3 degree credits, \$115.50.

Concentrated, individualized approach to sharpen reading skills, expand vocabulary, improve comprehension. Sight reading drills, speed tests, word study, reading aloud. Wide variety of material at graded levels of difficulty from practical to literary. (Prereq 1105 or equivalent)

Fall Qtr Sec 1 Th—6:10-7:50, FolH 104

Span 3005 ORAL COMMUNICATION: SPEAKING AND LISTENING. 4 degree credits, \$154.

Dialogues, group discussions, simulated situational conversations, interviews, skits, debates based on themes from sound and video tapes, records, speakers from Spain and Spanish America. Emphasis on fluency in speaking and understanding of oral expression. (Prereq 1105 or equivalent)

Spring Qtr Sec 1 Th—6:10-8:40, FolH 306

★**Span 3022 BUSINESS SPANISH.** 4 degree credits, \$154.

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 203

Span 3104 THE ART OF READING LITERARY TEXTS. 4 degree credits, \$154. (◆\$77)

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 #)

Winter Qtr Sec 1 Th—6:10-8:40, FolH 406

Span 3601 SPANISH AMERICA: REVOLUTION AND THE NEW LITERARY CONSCIOUSNESS. 4 degree credits, \$154. (◆\$77)

Avant-garde movements in the fiction of the Latin American continent; correspondence to revolutionary trends in Spanish-speaking countries. Famous novels. Taught

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

in English. **May not be used for Spanish or Portuguese major credit.** (No prereq. May be applied toward the CLA second language requirement, Route II, for Spanish and Portuguese [see page 562])

Fall Qtr Sec 1 M—6:10-8:40, FolH 406

Span 3602 THE PICARESQUE WAY OF LIFE IN SPAIN AND EUROPE: LITERATURE AND THE DELINQUENT. 4 degree credits, \$154. (♦\$77)

Designed to introduce the major picaresque novels of Europe and Latin America by concentrating on the Spanish origins of the genre, XVI Century, its zenith, XVII Century, and its evolution to the present day. The course stresses the literary and sociological examination of picaresque novels and traces the new directions of the picaresque genre in modern times. The course will concentrate on famous Spanish and Latin American novels translated into English. Knowledge of Spanish not necessary. May be applied toward the CLA second language requirement, Route II for Spanish [see page 562]. (No prereq. Not to be used for Spanish or-Portuguese major credit)

Winter Qtr Sec 1 W—6:10-8:40, FolH 205

Span 3614 DON QUIJOTE: STUDY OF LOST ILLUSIONS. 4 degree credits, \$154. (♦\$77)

The Spanish classic Don Quijote de la Mancha by Miguel de Cervantes in English. The humor, pathos, and philosophy of Don Quijote, as well as Cervantes' style. (No prereq. May be applied toward the CLA second language requirement, Route II, for Spanish [see page 562]. Not to be used for Spanish or Portuguese major credit)

Fall Qtr Sec 1 W—6:10-8:40, FolH 308

Span 3615 LITERATURE AND FILM. 4 degree credits, \$154 plus \$10 course fee. Total \$164. (♦\$77 plus \$10 course fee. Total \$87)

The course focuses on the artistic techniques and social content of the literature and cinema of the Spanish and Portuguese speaking worlds: Spanish America, Spain, Brazil, and Portugal. (No prereq. May be applied toward the CLA second language requirement, Route II, for Spanish or Portuguese [see page 562]). Not to be used for Spanish major credit. A minimum of 25 students must enroll for this course to be offered)

Spring Qtr Sec 1 W—6:10-8:40, FolH 308

(See also related film courses in American Studies, Art History, General College, German, Humanities, Informal Courses, Rhetoric, and Scandinavian Languages)

WINTER QUARTER IN CUERNAVACA

Spanish in Cuernavaca, Mexico: Cosponsored by the Department of Spanish and Portuguese and Extension Classes Office of Study Abroad. Integrates intensive language instruction, culture courses, and field trips with home-stay experience. Some courses may fulfill CLA second language requirements (see page 562). (12 to 14 credits; prereq #.) **For information:** call Extension Classes Office of Study Abroad at 376-5049.

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.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**Span 0221 READING SPANISH.** No credit, \$148. (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)

Fall Qtr Sec 1 **Th**—6:20-8:50, FoH 103

Spanish 0221 is offered as a Summer Extension Class.

Special Education

(See Educational Psychology for course work)

Speech-Communication (Spch)

College of Liberal Arts

Textbooks for most Spch courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

(See also English, General College, Informal Courses, Linguistics, Journalism, Professional Improvement Courses, and Rhetoric; and MacPhail Center for the Arts)

Rosita Albert, Associate Professor of Speech-Communication
Leonard D. Bart, Associate Professor of Speech-Communication
Donald R. Browne, Professor of Speech-Communication
David Dotlich, Lecturer in Speech-Communication
Sheldon Goldstein, Professor of Speech-Communication
William S. Howell, Professor Emeritus of Speech-Communication
David Lapakko, Teaching Associate in Speech-Communication
Jerie McArthur, Lecturer in Speech-Communication
Harold A. Miller, Professor of Speech-Communication
Harry Myers, Instructor in Speech-Communication
Patricia Palmerton, Instructor in Speech-Communication
Sandra Petronio, Assistant Professor of Speech-Communication
Sally Jo Power-Ross, Assistant Professor of Speech-Communication
Paula Pribble, Teaching Assistant in Speech-Communication
George L. Shapiro, Professor of Speech-Communication
Richard E. Sykes, Professor of Speech-Communication
Judith Van Putten, Lecturer in Speech-Communication

A MAJOR IN SPEECH-COMMUNICATION CAN BE COMPLETED IN THE EVENING.

All courses required in the undergraduate major are offered over a two-year period of time. Interested students should discuss plans with an Extension counselor (373-3905). Students deciding to work for the major should confer with a departmental adviser early in their work (call 373-2617) 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.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Major Requirements

Three courses are required: 3211, 3401, and 3601. In addition to these courses, a major selects six four-credit courses to complete a total of 36 quarter credits in upper division courses.

An average grade of 2.5 must be obtained in Spch 1102, 3211, 3401, and 3601 in order to declare officially a Speech-Communications major.

Although sufficient courses are offered in evening classes, the selection a student will have will be limited. Extension students should be aware of courses offered at 4:15. These are "day" classes with some places available for extension registration. The availability of these courses will make the individual's choice broader.

A minor is also available in Speech-Communication. Interested students should contact Extension Counseling, 373-3905.

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 376-3000 two weeks before mail registration for that quarter begins.

★**Spch 0001C BEGINNING SPEECH-COMMUNICATION.** 3 certificate credits, \$111 plus \$5.50 special fee. Total \$116.50.

Designed particularly for the adult student who wants a practical application of speech-communication techniques to his professional business and social needs. Planned to develop confidence and effectiveness in day-to-day speaking situations. Individual attention is given to every student. Each student speaks before the class each meeting. When possible, a session before live television cameras is provided each student. (No prereq. Limited to 25)

Fall Qtr Sec 1 **M**—6:20-8:50, FolH 203

Winter Qtr Sec 2 **M**—6:20-8:50, FolH 306

Spring Qtr Sec 3 **M**—6:20-8:50, FolH 307

★**Spch 1101 FUNDAMENTALS OF SPEECH COMMUNICATION: ORAL COMMUNICATION.** 4 degree credits, \$148.

Basic understanding of oral communication processes. Study and application of essential elements in oral communication. Consideration of criticism and response to oral discourse. Opportunities for individual speaking. (No prereq. Limited to 25)

Fall Qtr Sec 1 **M**—6:20-8:50, Richfield HS 142, Myers

Sec 2 **Th**—6:20-8:50, FolH 406, Bart

Winter Qtr Sec 3 **M**—6:20-8:50, FolH 203, Myers

Spring Qtr Sec 4 **M**—6:20-8:50, FolH 203

Spch 1102 FUNDAMENTALS OF SPEECH-COMMUNICATION: COMMUNICATION PROCESS. 4 degree credits, \$148. (◆\$74)

Introduction to the identification and analysis of variables in intrapersonal, interpersonal, and group communication. (No prereq)

Fall Qtr Sec 1 **T**—6:20-8:50, FolH 406, Petronio

Winter Qtr Sec 2 **W**—6:20-8:50, FolH 208, Power-Ross

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★Spch 3104 **BROADCAST PRODUCTION AND CREATIVITY.** 4 degree credits, \$3201, \$154.

Lectures and creative exercises in professional level radio and television studios to introduce students to variables in writing and producing material for the broadcast media. (No prereq. Limited to 28).

Winter Qtr Sec 1 **Th**—6:20-8:50, EddyH Radio Studio, Bart

★Spch 3111 **LEADERSHIP COMMUNICATION.** 4 degree credits, \$Air 3302, \$154. (◆\$77)

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)

Spring Qtr Sec 1 **T**—6:20-8:50, FolH 406, McArthur

★Spch 3201 **INTRODUCTION TO BROADCASTING PRODUCTION.** 4 degree credits, \$154 plus \$4 special fee. Total \$158.

Fundamentals of practice and theory in radio and television. Emphasis on projects and exercises in performance and scripting; introduction to studio equipment and procedures. Historical and sociological aspects of broadcasting. (No prereq. Limited to 25)

Fall Qtr Sec 1 **T**—6:20-8:50, RarigC 616

Winter Qtr Sec 2 **T**—6:20-8:50, RarigC 616

★Spch 3204 **TELEVISION PRODUCTION.** 4 degree credits, \$154 plus \$4 special fee. Total \$158.

Equipment and staff organization; interrelationships with program design. Exercises. (Prereq 3201. Limited to 22)

Spring Qtr Sec 1 **Th**—6:20-8:50, RarigC 610, Bart

Spch 3211 **DETERMINANTS OF BROADCAST PROGRAMMING.** 4 degree credits, \$154. (◆\$77)

Historical development and contemporary aspects of broadcast programming. How governmental, industrial, and public organizations influence program decisions. "Problem" areas of programming. (No prereq)

Spring Qtr Sec 1 **W**—6:20-8:50, FolH 406, Browne

Spch 3401 **THEORIES OF INTERPERSONAL COMMUNICATION.** 4 degree credits, \$154. (◆\$77)

Analysis of various theories of interpersonal communication and their usefulness for particular purposes. (Prereq 1102 or #, Psy 1001)

Winter Qtr Sec 1 **M**—6:20-8:50, FolH 50, Sykes

★Spch 3431 **THE ROLE OF PERSUASION IN THE MODERN WORLD.** 4 degree credits, \$154.

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**—6:20-8:50, FolH 306, Lapakko

Spring Qtr Sec 2 **M**—6:20-8:50, FolH 406, Lapakko

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

- Spch 3601 APPROACHES TO PUBLIC DISCOURSE.** 4 degree credits, \$154. (◆\$77)
 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)
Fall Qtr Sec 1 **M**—6:20-8:50, FolH 306, Pribble
- ★**Spch 3641 DISCUSSION AND CONFERENCE METHODS.** 4 degree credits, \$154.
 Cooperative thinking in task-oriented groups. Planning, preparing for, participating in, and leading private and public meetings. (Prereq 1101 or 1101H or #. Limited to 25)
Fall Qtr Sec 1 **W**—6:20-8:50, FolH 406, McArthur
Winter Qtr Sec 2 **M**—6:20-8:50, FolH 406, Dotlich
Spring Qtr Sec 3 **T**—6:20-8:50, FolH 306
- ★**Spch 5110 ADVANCED TOPICS IN SPEECH-COMMUNICATION THEORY.** 4 degree credits, \$154.
 Advanced theoretical problems. See department office for current offering. (Prereq 3211, 3401, 3601 [whichever is relevant to topic]; may be repeated for credit with #. 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**—4:15-6, FolH 50, Sykes
- ★**Spch 5222 EDUCATIONAL TELEVISION PROGRAMMING AND ADMINISTRATION.** 4 degree credits, \$154.
 Television applied to educational needs; current practices; significant research findings; relative effectiveness of differing types of television utilization; impact of various modes of transmission on programming and administrative concepts. (Prereq 3211 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 4 Extension students)
Spring Qtr Sec 1 **MW**—4:15-6, RarigC 610, Goldstein
- ★**Spch 5402 PROBLEMS IN INTERPERSONAL COMMUNICATION.** 4 degree credits, \$154.
 A study of factors contributing to misunderstanding, not understanding, disagreement, and cessation of contact in dyads. (Prereq 3401 or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 35)
Winter Qtr Sec 1 **M**—6:20-8:50, FolH 305, McArthur
- ★**Spch 5405 NONVERBAL COMMUNICATION: THEORY AND RESEARCH.** 4 degree credits, \$154.
 Nonverbal (extra-linguistic) elements and dimensions of interpersonal communication. Nonverbal categories examined to include gesture, facial expression, posture, clothing, and environment. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30)
Fall Qtr Sec 1 **W**—6:20-8:50, FolH 50, Sykes
 ① Sec 2 **MW**—4:15-6, FolH 50, Sykes
 (A joint Day/Extension class limited to 10 Extension Students)
- ★**Spch 5406 FAMILY COMMUNICATION.** 4 degree credits, \$154.
 Using a life cycle perspective, an examination of the evolution of communicative patterns among the members of a nuclear family at various stages of development.

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

(Prereq 1102, 3401 for undergrads...5421 or equivalent for grads. Qualified students may register for graduate credit at the University of Minnesota. Limited to 35)

Spring Qtr Sec 1 **Th**—6:20-8:50, FolH 406, Petronio

★**Spch 5414 AUTHORITY AND POWER IN TASK-ORIENTED COMMUNICATION.** 4 degree credits, \$154.

Authority and power in task-oriented groups. Tavistock-type small group, intergroup and large group laboratory experiences. Verbal and nonverbal processes which operate in and among groups to facilitate or inhibit effective leadership and followership. **S-N registration only.** (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, FolH 110, Howell

★**Spch 5422 INTERVIEWING AND COMMUNICATION.** 4 degree credits, \$154.

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 #. **Sec 1 may not be taken for graduate credit.** Qualified students may register in sec 2 for graduate credit at the University of Minnesota. Limited to 25)

Winter Qtr Sec 1 **W**—6:20-8:50, FolH 406, Van Putten

Spring Qtr ① Sec 2 **TTh**—4:15-6, FolH 406, Miller

(A joint Day/Extension class limited to 5 Extension students)

(See also GC 3605, Interviewing)

★**Spch 5431 THE PROCESS OF PERSUASION.** 4 degree credits, \$154.

Theories of modern motivational communication. Analysis of the process of social control through persuasive speech. (Prereq 1102 or Psy 1001. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class limited to 10 Extension students)

Spring Qtr Sec 1 **TTh**—4:15-6, FolH 50, Howell

Spch 5441 COMMUNICATION IN HUMAN ORGANIZATIONS. 4 degree credits, \$154.

Analysis of functions of communication in organizational settings. Organizational structure and dynamics and their effect upon communication process. Collateral readings and individual projects. (Prereq 1102 or 3401, 3641 or 5411, or grad. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr ★① Sec 1 **MW**—4:15-6, FolH 209, Shapiro

(A joint Day/Extension class limited to 10 Extension students)

Spring Qtr Sec 2 **M**—6:20-8:50, FolH 306, Dotlich

★**Spch 5452 WORKSHOP IN INTERCULTURAL COMMUNICATION.** 4 degree credits, \$154.

Small group training for foreign and U.S. students in communicating across cultures; group discussions, role playing, simulations, lectures as methods. **Must be taken S-N.** (Prereq #...5451 recommended. 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 **TTh**—4:15-6, FolH 306, Albert

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Statistics (Stat)

College of Liberal Arts

Textbooks for most Stat courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

Donald A. Berry, Professor of Statistics

Kinley Lantz, 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 376-3000 two weeks before mail registration for that quarter begins.

Stat 1051 INTRODUCTION TO IDEAS OF STATISTICS. 4 degree credits, \$148.

Presentation and analysis of data. Probabilistic models for inference. Inference and decision procedures. Emphasis on concepts rather than computation. (Prereq high school higher algebra)

Fall Qtr Sec 1 **W**—6:20-8:50, VinH 206
Sec 2 **Th**—6:20-8:50, VinH 20

Winter Qtr Sec 3 **Th**—6:20-8:50, MurH 311

Spring Qtr Sec 4 **Th**—6:20-8:50, MurH 308

★Stat 3091 INTRODUCTION TO PROBABILITY AND STATISTICS. 4 degree credits, \$5121, \$5131, \$154.

Elementary probability and probability distributions, sampling and elements of statistical inference. Treatment more mathematical than that in 1051. (Prereq differential and integral calculus. Limited to 35)

Fall Qtr Sec 1 **T**—6:20-8:50, VinH 20
Sec 2 **W**—6:20-8:50, VinH 207

Winter Qtr Sec 3 **W**—6:20-8:50, MurH 308

Sec 4 **Th**—6:20-8:50, MurH 308

Spring Qtr Sec 5 **T**—6:20-8:50, VinH 207

Sec 6 **W**—6:20-8:50, VinH 207

★Stat 5021 STATISTICAL ANALYSIS I. 5 degree credits, \$192.50.

Frequency distributions; descriptive statistics; elementary probability; binomial, Poisson, and normal distribution; estimation and testing; analysis of variance; multiple comparisons; linear regression. (Prereq college algebra 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 B30, StP Campus, Lantz

★Stat 5022 STATISTICAL ANALYSIS II. 5 degree credits, \$192.50.

(Continuation of 5021) Multiple regression and correlation; multiway analysis of variance, variance components, covariance; elementary principles of design; basic nonparametric methods. (Prereq 5021 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 B30, StP Campus, Lantz

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Studio Arts

(See Arts, Studio)

Student Project for Amity Among Nations (SPAN)

Language courses offered by SPAN are listed under Foreign Studies. SPAN provides unusual opportunities for undergraduate study abroad through a unique summer research project conducted in four different countries each year. In 1985, four groups, each with an academic adviser who is an expert in the country concerned, will go to the British Isles, Japan, Malawi, and Thailand. Participants are selected a year prior to their summer abroad and enter a nine-month orientation program in the language and culture of their selected country. For further information, contact SPAN, 309 SocSci, 267 19th Ave. S., University of Minnesota, Minneapolis, MN 55455 (376-5219).

Study Skills

(See Personal Orientation)

Swedish

(See Scandinavian Languages)

T

Textiles and Clothing (TexC)

College of Home Economics

(Department of Design, Housing, and Apparel)

Textbooks for most TexC courses are available at Books Underground on the St. Paul campus (373-0800)

Stowe Badenoch, Lecturer in Textiles and Clothing
Robert Johnson, Professor of Textiles and Clothing

★**TexC 1602 FITTING THE HUMAN SUBJECT.** 2 degree credits, \$74.

Analysis of a variety of body forms. Use and modification of sizing systems. Relation of fabric to the human body. (Prereq Δ [Call 373-1032]. Limited to 20)

CEW

Fall Qtr Sec 1 **T**—7-9:30, McNH 475, StP Campus

Sec 2 **W**—9 a.m.-12, McNH 475, StP Campus

Offered through Continuing Education for Women

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**TexC 1603 ADVANCED PRINCIPLES OF APPAREL PRODUCTION.** 2 degree credits, \$74.

Problem solving approach to apparel construction. Analysis of materials, labor cost, and production techniques. (Prereq 1602. Limited to 20)

Winter Qtr Sec 1 **T**—7-9:30, McNH 475, StP Campus

TexC 3601 TAILORING. 4 degree credits, \$196.

Principles of structuring tailored garments. Analysis of hand, machine, and fusing methods. (Prereq 1603)

Fall Qtr Sec 1 **MW**—6:30-9:30, McNH 480, StP Campus

★**TexC 3604 FLAT PATTERN DESIGN.** 3 degree credits, \$147.

Principles of flat pattern design; drafting and advance pattern development. (Prereq sophomore, 1601 or proficiency, 1603, 3662 or Dsgn 1525 or Δ[call 373-1032]. Limited to 20)

Spring Qtr Sec 1 **TTh**—7-9, McNH 480, StP Campus

★**TexC 3646 RETAIL SUPERVISION.** 3 degree credits, \$147.

Techniques of management, motivation, and supervision with specific attention to retailing environment. Participation through case study in discussion of management by objectives and participative management approach to retail supervision. (Prereq Mgmt 3001, Mgmt 3002 or #)

Fall Qtr Sec 1 **W**—6-8:15, FordH 55, Badenoch

TexC 5622 ISSUES AND TRENDS IN TEXTILE CONSUMER PROTECTION. 3 degree credits, \$147.

The needs of the textile consumer for protection from deception and hazard; analysis of federal, state, and local legislation as well as voluntary industrial systems; case histories; change mechanisms. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

Winter Qtr Sec 1 **Th**—6-8:30, AndH 370, Johnson

Theatre Arts (Th)

College of Liberal Arts

Textbooks for most Th courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450)

(See also MacPhail Center for the Arts; English; Continuing Education for Women; and Informal Courses)

Arthur Ballet, Professor of Theatre Arts

Kent Neely, Lecturer in Theatre Arts

Charles Nolte, Professor of Theatre Arts

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 376-3000 two weeks before mail registration for that quarter begins.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Th 1102 DRAMA AND MEDIA. 4 degree credits, \$148.

Study of dramatic form in contrasting media: theatre, film, and television. Lectures and film showings. Choice of outside viewing experiences. (No prereq)

Winter Qtr Sec 1 **T**—6:20-8:50, RarigC 275, Neely, Nolte

Th 1301 ACTING FOR NON-THEATRE MAJORS. 4 degree credits, \$148.

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)

Spring Qtr Sec 1 **Sa**—9 a.m.-12, RarigC 90

***Th 1504 ELEMENTS OF TECHNICAL THEATRE.** 4 degree credits, \$148.

The arts and crafts of the theatre: scenery, construction and painting, stage operation, theatre lighting, costuming. Laboratory. (Prereq 1101 or ¶1101. Limited to 20)

Winter Qtr Sec 1 **M**—6-9, RarigC 275

SPRING QUARTER IN LONDON: English and Theatre Arts

Literature in London: Spring quarter in London, England, cosponsored by the departments of English and Theatre Arts, and the Extension Classes Office of Study Abroad. Incorporates literary history, geographical and cultural perspectives into reading and study of literature and drama. Graduate credit available. (12 to 16 credits.) **For information:** Call Extension Classes Office of Study Abroad at 376-5049.

Transportation and Business Logistics (Tran)

School of Management

Textbooks for most Tran courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450)

Frederick J. Beier, Professor of Transportation and Logistics

Keith H. Clark, Lecturer in Transportation and Logistics

Donald V. Harper, Professor of Transportation and Logistics

Transportation courses may not be taken S-N.

***Tran 3054 FUNDAMENTALS OF TRANSPORTATION.** 4 degree credits, \$8154, \$179.

Organization and economic aspects of the transportation system of the United States including rail, highway, air, pipeline, and water transportation. Administration of transportation by users of transportation, providers of transportation (carriers), and government. **May not be taken S-N.** (Prereq Econ 1002 or equivalent and at least 90 credits completed or in progress. **Open to nondegree students with equivalent experience.** Limited to 40)

Fall Qtr Sec 1 **M**—5:30-8, BlegH 150, Harper

Winter Qtr Sec 2 **M**—5:30-8, AndH 310, Harper

Spring Qtr Sec 3 **M**—5:30-8, RarigC 616, Harper

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Tran 3064 BUSINESS LOGISTICS. 5 degree credits, §Tran 8264, \$223.75.

Control of the flow of physical product by the firm. Topics include rate negotiation, transportation alternatives, logistic information systems, inventory control, warehouse operations and location, and logistics system design. **May not be taken S-N.** Offered even-numbered years. (Prereq 3054 and at least 90 credits completed or in progress. **Open to nondegree students with equivalent experience.** Meets concurrently with 8264)

Fall Sem Sec 1 W—5:30-8, Mgmt/Econ 128

Tran 3084 CARRIER MANAGEMENT. 5 degree credits, §8284, \$223.75.

Managerial problems of rail, highway, air, and water carriers. Topics include problems associated with carrier organization, operations, traffic and sales, finance and control, labor relations, public policy issues, and shipper-carrier interface. **May not be taken S-N. Offered odd-numbered years beginning 1985.** (Prereq 3054 and at least 90 credits completed or in progress. **Open to students with equivalent experience.** Meets concurrently with 8284)

Tran 5134 TRANSPORTATION AND BUSINESS LOGISTICS TOPICS: TOP MANAGEMENT PERSPECTIVES IN TRANSPORTATION. 4 degree credits, \$179.

Managerial problems in transportation and logistics as seen from the perspective of high-level executives. Includes a series of lecture-discussion sessions conducted by executives of leading Twin Cities area carrier and user organizations. **May not be taken S-N.** (Prereq 3054 or 8154 and at least 90 credits completed or in progress. **Open to nondegree students with equivalent experience.** Not available for graduate credit)

Fall Qtr Sec 1 T—5:30-8, Mgmt/Econ 130, Clark

Tran 5134 TRANSPORTATION AND BUSINESS LOGISTICS TOPICS: INDUSTRIAL TRAFFIC MANAGEMENT. 4 degree credits, \$179.

Managerial problems associated with the shipper's use of transportation services. Topics: problems concerning organization for traffic management, transportation pricing, service alternatives, documentation, routing, consolidation, equipment utilization, warehousing, government regulation, use of private transportation, and others. (Prereq 3054 or 8154 and at least 90 credits completed or in progress. **Open to nondegree students with equivalent experience.** **May not be taken S-N.** Not available for graduate credit)

Spring Qtr Sec 2 T—5:30-8, Mgmt/Econ 128, Clark

Tran 8264 BUSINESS LOGISTICS. 5 degree credits, §Tran 3064, \$425.

See course description for Tran 3064. **May not be taken S-N.** (Prereq 3054. Open only to students admitted to the University of Minnesota Graduate School. Meets concurrently with 3064)

Fall Sem Sec 1 W—5:30-8, Mgmt/Econ 128

Tran 8284 CARRIER MANAGEMENT. 5 degree credits. **Tentatively scheduled for 1985-86.**

Turkish (Turk)

(See Middle Eastern and South Asian Studies)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

U

University College (UC)

(See the Degrees and Certificates section of this Bulletin)

Urban Affairs

(See Civil Engineering, Informal Courses, Design, General College, Geography, Industrial Relations, Public Affairs, Public Policy, Public Health, Sociology, and Urban Studies)

Urban Studies (UrbS)

College of Liberal Arts

Textbooks for most UrbS courses are available at the Harold D. Smith Bookstore on the West Bank campus (373-4450)

(See also GC 1212, Urban Problems; and IC 0154, The Future of the City)

Joint Day/Extension Classes

You may register through Extension for certain Day School classes scheduled before 4 p.m. in Urban Studies. For a copy of the current daytime *Class Schedule* and procedures for registration through Extension, call 376-3000 two weeks before mail registration for that quarter begins.

★UrbS 3900 **INTERNSHIP SEMINAR.** 1-6 degree credits (maximum 12 cr), \$38.50 a credit.

Internships arranged for any quarter or summer term. A weekly seminar to integrate the internship experience with the academic program should be taken during the internship. (Prereq junior or senior standing, # and Δ. A joint Day/Extension class limited to 5 Extension students)

Fall Qtr Sec 1 T—6-8, Mgmt/Econ 128

Winter Qtr Sec 2 T—6-8, Mgmt/Econ 130

Spring Qtr Sec 3 T—6-8, Mgmt/Econ 136

V

College of Veterinary Medicine (CVM)

James O. Hanson, Professor and Director of Veterinary Medicine Continuing Education
Michael M. Pullen, Professor of Veterinary Medicine

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

CVM 1100 CARE, MANAGEMENT, SHOWING AND DISEASES OF HORSES. 3 degree credits, \$111 plus \$30 special fee. Total \$141. (IS AnSc 1600)

Lectures and demonstrations by faculty members of the College of Veterinary Medicine and qualified well-known authorities on horses and horsemanship from the metropolitan area. (No prereq. Meets concurrently with IC 0290)

Winter Spec Term Sec 1 **Th**—Jan. 10–May 2 (no meeting Mar. 28),
7:30–9:30, AnScVM 135, StP Campus,
Hanson, Pullen (coordinators)

(See also Informal Courses in the noncredit section of this bulletin)

Vocabulary Building

(See General College communication skills)

Vocational and Technical Education

Continuing education courses for in-service vocational and practical arts teachers are offered on campus during late afternoons, and off-campus through Vocational Education Special Services or Continuing Education and Extension in the following programs:

- Agricultural Education
- Business and Marketing Education
- Home Economics Education
- Industrial Education
- Vocational Education

Late afternoon classes are scheduled each quarter and are listed in the day school **Class Schedule**. Continuing Education and Extension courses offered for vocational licensure and degree programs are scheduled at the request of and in cooperation with vocational program administrators. Requests for information about specific courses to be provided through Continuing Education and Extension or Vocational Education Special Services should be directed to Special Services, 210 Vocational and Technical Education Building, 1954 Buford Ave., University of Minnesota, St. Paul, MN 55108 (373-5050).

W

Women's Studies (WoSt)

College of Liberal Arts

Textbooks for most WoSt courses are available at the Minnesota Book Center in Williamson Hall (373-3688)

Jeanne Barker-Nunn, Teaching Assistant in Women's Studies

Aviva Breen, Associate Professor in Women's Studies

Carolyn Chalmers, Associate Professor in Women's Studies

Patricia S. Faunce, Professor of Psychology and Women's Studies

Bernice Fields, Associate Professor of Women's Studies

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Barbara Isaacman, Associate Professor of Women's Studies
 Lisa Knazan, Associate Professor of Women's Studies
 Margot Fortunato Kriel, Adjunct Instructor in Women's Studies
 Barbara H. Knudson, Professor of Women's Studies and Quigley Center
 Dorothy Loeffler, Associate Professor in Educational Psychology
 Doris Marquit, Assistant Professor of Women's Studies
 Naomi Scheman, Associate Professor of Philosophy and Women's Studies
 Nina Tarr, Associate Professor of Women's Studies
 Jacquelyn Zita, Assistant Professor of Women's Studies

(For related courses of interest, also see the following departments in this Bulletin: Continuing Education for Women; Family Social Science, General College, Informal Courses, Professional Improvement Courses and Seminars, Psychology, Rhetoric, Social Work, and Sociology)

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 376-3000 two weeks before mail registration for that quarter begins.

A minor is available in Women's Studies. Interested students should call Extension Counseling, 373-3905, for details.

WoSt 1006 INTRODUCTION TO WOMEN'S STUDIES. 4 degree credits each quarter, \$148 plus \$3 course fee. Total \$151 each quarter. (♦\$74 plus \$3 course fee. Total \$77 each quarter)

An introduction to women's studies as a discipline; a brief history of feminism; an overview of issues related to the current and rapidly changing role and status of women. (No prereq)

Fall Qtr Sec 1 **W**—6:20-8:50, FordH 285

WoSt 1155 WOMEN IN WORLD CULTURES. 4 degree credits, \$148. (♦\$74)

The lives of women in non-Western societies including their economic, political, and social contributions, familial roles, and status in society. (No prereq)

Winter Qtr Sec 1 **W**—6:20-8:50, FordH 285

WoSt 1977 THE PSYCHOLOGICAL ENVIRONMENT OF WOMEN. 4 degree credits, \$148 plus \$5 special fee. Total \$153. (♦\$74 plus \$5 special fee. Total \$79)

An examination of psychological principles and theories which have a unique application to the development, growth, and behavior of women; to inform and to contribute to the woman's awareness of where she is now and how she got there; to foster self-actualization of the young woman. (No prereq)

Fall Qtr Sec 1 **Th**—6:20-8:50, FordH 175, Faunce

★WoSt 3001 THE BIOLOGY OF WOMEN. 4 degree credits, \$154 plus \$3 course fee. Total \$157. (♦\$77 plus \$3 course fee. Total \$80)

Biological aspects of being a woman. Critical analysis of assumptions concerning women's biology drawn from several disciplines. For women and men. (Prereq Biol 1009 or Phsl 1001 or #. Limited to 40)

Winter Qtr Sec 1 **T**—6:20-8:50, FordH 349, Zita

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★**WoSt 3005 SEXUALITY AND SELF IMAGE.** 4 degree credits, \$154. (◆\$77)

Women's view of themselves as sexual beings, the effects of attitudes about sexuality on self-image, and the connections among sexuality, self-image, and self. (No prereq. Limited to 40)

Fall Qtr Sec 1 **T**—6:20-8:50, FordH 285, Scheman

WoSt 3103 THE MODERN FEMINIST NOVEL. 4 degree credits, \$154. (◆\$77)

An analysis of fiction written by women which addresses questions of women's identity and the diversity of women's experience. (Prereq completion of freshman English composition requirement or equivalent)

Spring Qtr Sec 1 **W**—6:20-8:50, FordH 175

(See also GC 1366, Literature: Images of Women in Literature; CEW 0303, Contemporary Fiction by Women; and CEW 0310, Women's Literature/Women's History)

WoSt 3200 WOMEN AND WORK. 4 degree credits (maximum 12 cr), \$154. (◆\$77)

The work that women do studied in its social, political, familial, and economic contexts. Topics may include women and economic structures, work and family, working-class women, women in the professions, women and development in the third world. (No prereq)

Winter Qtr Sec 1 **Th**—6:20-8:50, FordH 175, Faunce

WoSt 3300 COMPARATIVE STUDY OF WOMEN. 4 degree credits, \$154. (◆\$77)

Comparative treatment of and theories about women from the points of view of social science disciplines. Research methods for asking questions about women. (Prereq introductory courses in one or two social sciences)

CEW **Spring Qtr** Sec 1 **T**—9:30 a.m.-12, MacP

Offered through Continuing Education for Women

★**WoSt 3301 WOMAN: A SENSE OF IDENTITY.** 4 degree credits, \$5301, \$154.

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. *All sections offered through Continuing Education for Women.* (No prereq. No auditors. Meets concurrently with 5301. Limited to a combined total of 40)

Fall Qtr Sec 1 **T**—6:10-9:10, Armory 116
Sec 2 **Th**—1:15-4:15, Armory 116

CEW **Winter Qtr** Sec 3 **T**—6:10-9:10, Armory 116
Sec 4 **Th**—1:15-4:15, Armory 116

Spring Qtr Sec 5 **T**—6:10-9:10, Armory 116
Sec 6 **Th**—1:15-4:15, Armory 116

★**WoSt 3501 WOMEN AND LITERATURE.** 4 degree credits, \$154. (◆\$77)

Women writers and critics of literature about women. Usually limited to Western literature. Focuses on women as writers and readers of literature—how women's intelligence and imagination operate in writing or reading a literary work. Participants explore the concepts of a female literary tradition or imagination, the influence or literary history of recent studies of the representation of women, and some theories of feminist criticism. (No prereq. Limited to 30)

Fall Qtr Sec 1 **W**—7-9:30, Richfield HS, Marquit

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

WoSt 3705 WOMEN AND LANGUAGE. 4 degree credits, \$154. (◆\$77)

Women's use of language, sexism in language, contrast of usage and patterns of verbal and nonverbal language by women and men, feminist critiques of language and evaluations of proposals for language reforms or radical linguistic change. (No prereq)

cew**Fall Qtr** Sec 1 **W**—9:30 a.m.-12, MacP*Offered through Continuing Education for Women***WoSt 3838 FEMINIST THOUGHT AND THEORY.** 4 degree credits, \$154. (◆\$77)

Introduces theoretical aspects of women's studies through a survey of feminist theories concerning gender differences; the family; production and reproduction; sex, ethnicity, and class; and the social construction of sexuality. (No prereq)

cew**Winter Qtr** Sec 1 **M**—9:30 a.m.-12, MacP*Offered through Continuing Education for Women***WoSt 3910 TOPICS: WOMEN AND THEATER.** 4 degree credits, \$154. (◆\$77)

Plays by women in the 20th century, a course of discussion and writing. Students read works by Lillian Hellman, Megan Terry, and Ntozake Shange, Gertrude Stein, Lorraine Hansberry, and others. Students respond with journal or creative writing—monologues, dialogues, and plot lines—to issues such as women and history, for example, Stein's Susan B. Anthony, women's sexuality, mothers and daughters, and racial/ethnic identity. *The instructor is a published poet, playwright, and free-lance writer.* (No prereq)

cew**Winter Qtr** Sec 1 **Th**—1-3:30, MacP, Kriel*Offered through Continuing Education for Women***WoSt 5102 CURRENT FEMINIST SCHOLARSHIP.** 4 degree credits, \$154.

Current scholarship dealing with the feminist intellectual revolution. (Prereq 1005, 1006 or grad student or #. Qualified students may register for graduate credit at the University of Minnesota)

Spring Qtr Sec 1 **T**—6:20-8:50, FordH 285**★WoSt 5301 WOMAN: A SENSE OF IDENTITY.** 4 degree credits, \$3301, \$154.

See description for 3301. *All sections offered through Continuing Education for Women.* (No prereq. No auditors. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3301. Limited to a combined total of 40)

cew**Fall Qtr** Sec 1 **T**—6:10-9:10, Armory 116Sec 2 **Th**—1:15-4:15, Armory 116**Winter Qtr** Sec 3 **T**—6:10-9:10, Armory 116Sec 4 **Th**—1:15-4:15, Armory 116**Spring Qtr** Sec 5 **T**—6:10-9:10, Armory 116Sec 6 **Th**—1:15-4:15, Armory 116**★WoSt 5311 WOMEN AND THE LAW.** 4 degree credits, \$154. (◆\$77)

Course intends to make students more aware of the areas of the law that affect women, while providing, through the use of several local women lawyers, a model to all the students of women functioning well within a traditionally male-oriented profession. Areas of law covered include criminal, employment, welfare, labor,

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

corporate, legal education. (No prereq. 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 285, Breen, Chalmers, Knazan, Isaacman, Fields, Tarr

World Affairs

For information on noncredit conferences or lectures on world affairs, please contact Community Services, 320 Wesbrook Hall; telephone 373-3941.

Y

Youth Development and Research (YoSt)

College of Home Economics

Textbooks for most YoSt courses are available at Books Underground on the St. Paul campus (373-0800)

(See also Education; Family Social Science; Public Health; Continuing Education in Social Work; and Informal Courses)

Veryl Andre, Assistant Professor of Youth Studies

Michael Baizerman, Professor of Youth Studies

Jerome Beker, Professor of Youth Studies

Diane Hedin, Associate Professor of Youth Studies

James Kielsmeier, Assistant Professor of Youth Studies

Byron Schneider, Associate Professor of Youth Studies

Miriam Seltzer, Assistant Professor and Coordinator for Youth Studies

J. Pamela Weiner, Instructor in Youth Studies

YoSt 5120 INDEPENDENT STUDY IN YOUTH STUDIES. Cr arr. (maximum 12 cr). \$49 a credit.

Independent reading and/or research under faculty supervision. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Qtr Sec 1 **Arr.**

Winter Qtr Sec 2 **Arr.**

Spring Qtr Sec 3 **Arr.**

YoSt 5130 SPECIAL TOPICS: COMPULSIVE AND ADDICTIVE BEHAVIOR DURING ADOLESCENCE. 3 degree credits, \$147.

Addictions and "highs" to be studied will include chemical, relationship, sex, romance, activity, object, food, risk, fantasy, and gambling: attractions, consequences, self-perpetuating nature, and possible pathways away from addictions. Workshop format: films, exercises, case histories, resource speakers, and discussion.

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

(Prereq 6 cr in social sciences, experience in youth work, or #. Qualified students may register for graduate credit at the University of Minnesota)

Fall Spec Term Sec 1 **Th**—8:30 a.m.-4:30, Oct. 11, 18, 25, 1984,
McNH 274, StP Campus, Andre
No late fee through Oct. 4

★YoSt 5130 SPECIAL TOPICS: SEMINAR ON ADOLESCENT CHILDBEARING/CHILDREARING. 3 degree credits, \$PubH 5638, \$147.

Topics include prevention of adolescent pregnancy, service needs of adolescent parents, developmental aspects of teenage pregnancy and parenthood. Seminar includes presentations of theoretical, statistical, and analytical content, discussion of etiologies, interventive modes and professional issues, and an opportunity to explore one facet of the seminar topic in an integrated manner. (Prereq previous course work in Youth Studies, Public Health, or Social Sciences recommended. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Winter Qtr Sec 2 **T**—4-6:30, McNH 386A, StP Campus, Weiner

○YoSt 5130 SPECIAL TOPICS: ADVENTURE-BASED EXPERIENTIAL EDUCATION. 3 degree credits, \$147 plus \$25 course fee. Total \$172.

Empowering methods of personal development employing challenging high-risk outdoor methods are examined. Emphasis is focused on the historical and theoretical roots of the most vital program designs of this growing field, including Outward Bound; alternatives to incarceration for juvenile offenders; and leadership training. Classroom meetings plus required overnight practicum at Wilder Forest, Marine-on-St. Croix, Oct. 25-26. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 3 **T**—4-6, McNH 197, StP Campus, Kielsmeier

○YoSt 5132 EXPERIENTIAL LEARNING. 3 degree credits, \$147.

Course will cover (1) rationale for and purposes of experiential learning in schools and youth-serving agencies, (2) the development and implementation of programs in which adolescents are performing valued service and work in their communities, and (3) evaluation of experiential-learning programs. Each student will develop a plan for experiential program for teenagers. (Prereq CPsy 5303 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **T**—4-6:30, McNH 386, StP Campus, Hedin

Registration information on the following four courses is available from the Center for Youth Development and Research, 386 McNeal Hall (376-7624). Descriptions follow:

★YoSt 5230 WORK WITH YOUTH—INDIVIDUAL. 3 degree credits, \$147.

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 5303, or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Fall Spec Term Sec 1 **Arr**, 8:30 a.m.-4:30, McNH 386A, StP Campus

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

★YoSt 5231 WORK WITH YOUTH—FAMILIES. 3 degree credits, \$147.

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, or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Winter Spec Term Sec 1 **Arr**, 8:30 a.m.-4:30, McNH 386, StP Campus

★YoSt 5232 WORK WITH YOUTH—GROUPS. 3 degree credits, \$147.

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 or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Spring Spec Term Sec 1 **Day Arr**, 8:30 a.m.-4:30, McNH 386A, StP Campus

○YoSt 5330 CHILD AND ADOLESCENT PSYCHOLOGY FOR PRACTITIONERS. 3 degree credits, \$147.

This course will emphasize application of theory and research in adolescent and child psychology, including how research findings can be utilized by practitioners and how various theories (behavioral, humanistic, cognitive-developmental, psycho-dynamic, and social-psychological) can be used to better understand the behavior of young people. The experiences of the class participants in terms of their own adolescence and their current work with youth will provide the "case material" for the course. (Prereq courses in educational psychology, child or adolescent psychology. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Fall Qtr Sec 1 **Th**—4-6:30, McNH 386A, StP Campus, Hedin

○YoSt 5331 YOUTH AGENCIES, ORGANIZATIONS AND YOUTH SERVICE SYSTEM. 3 degree credits, \$147.

Overview of major forms of youth agencies and organizations with emphasis on sources of agency legitimacy, ideologies and values, and goals. Also overview of relations between and among agencies and organizations. Foci include 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. A joint Day/Extension class)

Winter Qtr Sec 1 **Th**—4-6:30, McNH 386A, StP Campus

○YoSt 5332 UNDERSTANDING AND WORKING WITH SPECIAL POPULATIONS OF YOUTH. 3 degree credits, \$147.

Range of treatment methods and their rationale for working with adolescents with a variety of special problems from a normalizing, developmental perspective. (Prereq YoSt 5331 or #. Qualified students may register for graduate credit at the University of Minnesota. A joint Day/Extension class)

Spring Qtr Sec 1 **Th**—4-6:30, McNH 386A, StP Campus

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

★YoSt 5401 **COMMUNICATING WITH ADOLESCENTS ABOUT SEXUALITY.** 3 degree credits, \$147.

An exploration of childhood and adolescent sexual development and experience, with an emphasis on how adults can be comfortable with their sexuality in order to communicate more effectively with younger people. Issues will include sexual patterns, variations, roles, exploitative sex, power, and sex education. Workshop format: films, exercises, case histories, resource speakers, and discussion. (Prereq 6 cr in social sciences, experience in youth work, or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 18)

Fall Spec Term Sec 1 **Th**—8:30 a.m.-4:30, Nov. 1, 8, 15, 1984
McNH 274, StP Campus, Andre
No late fee through Oct. 25

★YoSt 5402 **SERIOUS ADOLESCENT SEXUALITY PROBLEMS: SEXUAL ABUSE, RAPE, INCEST, PROSTITUTION, AND UNPLANNED PREGNANCY.** 3 degree credits, \$147.

This course will focus on the serious sexuality problems faced by some adolescents, and on the knowledge and skills needed by adults who want to prevent or respond helpfully to these problems. Workshop format: films, exercises, case histories, resource speakers, and discussion. (Prereq 6 cr in social sciences, experience in youth work, or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 18)

Winter Spec Term Sec 1 **Th**—8:30 a.m.-4:30, Feb 7, 14, 21, 1985
McNH 274, StP Campus, Andre
No late fee through Jan. 31

★YoSt 5403 **INTERVENTION AND COUNSELING WITH ADOLESCENTS AND FAMILIES REGARDING SERIOUS SEXUALITY PROBLEMS.** 3 degree credits, \$147.

Will explore in greater depth than 5402, the social and psychological dynamics of serious sexuality problems and the available methods of intervention. Workshop format: films, exercises, case histories, resource speakers, and discussion. (Prereq 5402, experience in working with adolescents with serious sexuality problems, or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 18)

Spring Spec Term Sec 1 **Th**—8:30 a.m.-4:30, Apr 11, 18, 25, 1985
McNH 274, StP Campus, Andre
No late fee through Apr. 4

★YoSt 5631 **HEALTH NEEDS AND PROBLEMS OF ADOLESCENT FEMALES.** 4 degree credits, \$196.

Identifies and analyzes major health concerns, developmental controversies and health behavior socialization of adolescent females from historical, cultural, and clinical perspectives. Models of service delivery, public health intervention, and philosophies of youth advocacy and wellness will be explored as well as the needs of specific adolescent consumer groups (e.g., parents, abuse victims, minority women, etc.). Guest speakers from community agencies, youth-serving groups and many academic disciplines will participate in class discussions. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with PubH 5631, sec 1. Limited to a combined total of 40)

Fall Qtr Sec 1 **T**—7-9:30, MoosT 2-580, Weiner

(See also WoSt 3001, Biology of Women)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

★YoSt 5636 **ADOLESCENT PARENTHOOD.** 3 degree credits, \$147.

With the increase in adolescent pregnancy and parenting, youthworkers have been called upon to confront the health, psycho-social, and developmental problems and requirements of the young parent. This course focuses on current research about adolescent parenthood and strategies to promote successful outcomes for young parents and their children. (Prereq 6 cr in social science or public health or equivalent work experience or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Fall Spec Term Sec 1 F—9 a.m.-4:30, Oct. 12, 19, 26, 1984

McNH 386A, StP Campus, Weiner

No late fee through Oct. 5

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Continuing Education for Women (CEW)

Courses for Credit

Credit classes meet once a week, usually during the day, at off-campus locations. Courses 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 1984-85 academic year are grouped by quarter. For complete course descriptions and prerequisites, refer to the individual department listings. For example, for Anth 1102, refer to Anthropology and the CEW section number. Credit classes begin on page 61.

Registration procedures, dates, and locations are the same as for credit registration. See the **When and How to Register** section of this Bulletin for details.

Fall Quarter 1984

Anth 1102,	sec 2	Introduction to Social and Cultural Anthropology
ArtH 3011,	sec 1	History of Renaissance and Baroque Art
Dsgn 5571,	sec 1	Complex Weaves: From the Traditional Floor Loom to the Jacquard
Engl 5100,	sec 1	Advanced Nonfiction Writing: Introduction to Editing
FSoS 5240,	sec 1	Female Sexuality
GC 1535,	sec 2	Introduction to Data Processing
Hum 1301,	sec 1	The Life of the Mind
Math 0009,	sec 22	Intermediate Algebra
Phil 1002,	sec 2	Introduction to Philosophy
TexC 1602,	sec 2	Fitting the Human Subject
WoSt 3301,	sec 1, 2	Woman: A Sense of Identity
WoSt 3705,	sec 1	Women and Language
WoSt 5301,	sec 1, 2	Woman: A Sense of Identity

Winter Quarter 1985

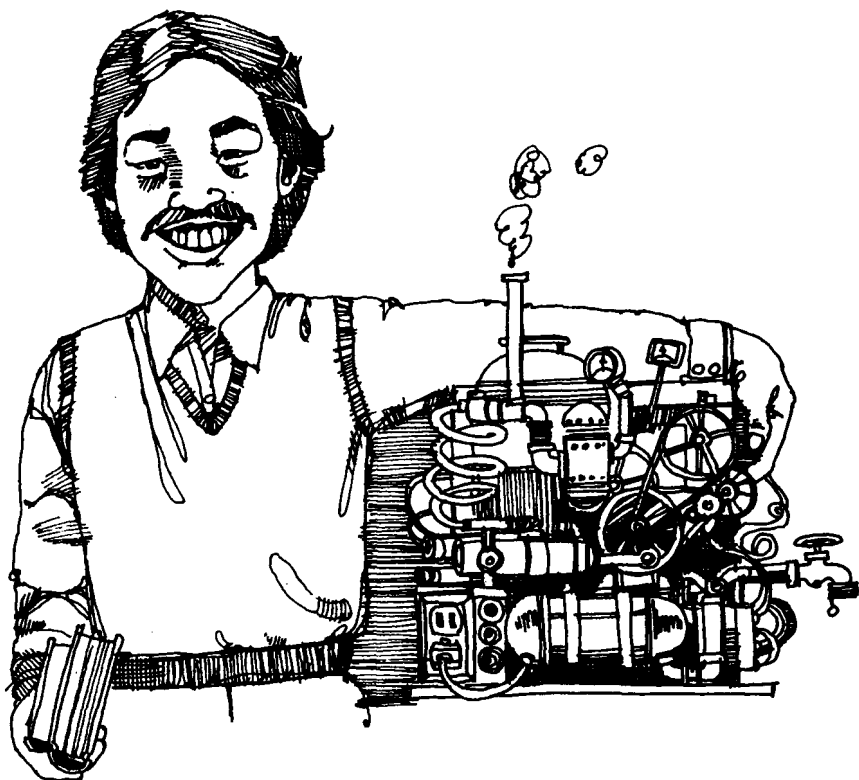
Anth 3303,	sec 1	Women: Anthropological Perspectives
ArtH 1001,	sec 1	Introduction to the Visual Arts
ArtH 3001,	sec 1	Introduction to the Visual Arts
Clas 3072,	sec 1	The New Testament
Clas 5072,	sec 1	The New Testament
Engl 5620,	sec 1	British and American Women Writers
GC 1513,	sec 3	Principles of Small Business Operations
Hist 3347,	sec 1	Women in Colonial and Victorian America: 1600-1890
Math 1111,	sec 13	College Algebra and Analytic Geometry
Psy 1001,	sec 9	General Psychology
WoSt 3301,	sec 3, 4	Woman: A Sense of Identity
WoSt 3838,	sec 1	Feminist Thought and Theory
WoSt 3910,	sec 1	Women and Theater
WoSt 5301,	sec 3, 4	Woman: A Sense of Identity

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Spring Quarter 1985

AmSt 3113, sec 3	American Cultural Diversity
Engl 3940, sec 3	Figures in English and American Literature: American Women Writers
Engl 5100, sec 3	Advanced Nonfiction Writing: Introduction to Editing
GC 1442, sec 1	Functions and Problems of Logic
Hist 3348, sec 1	Women in Modern America: 1890-1980
Psy 5141, sec 2	Psychology of Women
WoSt 3300, sec 1	Comparative Study of Women
WoSt 3301 sec 5, 6	Woman: A Sense of Identity
WoSt 5301 sec 5, 6	Woman: A Sense of Identity



Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

Noncredit Courses

Three departments offering a selection of noncredit University courses are listed in this section of the Extension Classes Bulletin:

Continuing Education for Women

covers the Arts and Humanities; Career Planning/Development/Self-Help; Literature/Writing; Mathematics/Computer Technology; and Social Science. Courses begin on page 444.

Informal Courses

cover the Arts and Humanities; the Natural World; Society, Behavior, and Culture; Personal Growth and Survival Skills; Lifetime Adventures in Learning; and Study and Travel Adventures. Courses begin on page 473.

Professional Improvement Courses

are offered on two levels. The first level is Beginning Management Skills. The second level is the Effective Manager and Professional with topics covering Personal Development; Leadership and Management; Managerial Finance and Control; Computer Use and Applications; External Relations; and Professional Insights. Courses begin on page 505.

MacPhail Center Courses

include classes in the arts in Musical Instruments, Voice, Jazz, Chamber Music, Music Theory, Music Appreciation, Dance, and Photography. Courses begin on page 522.

Many University credit Extension classes also may be taken for no credit. They are indicated in the Credit Courses section of this Bulletin by a diamond symbol (◆). Credit classes begin on page 61.

Continuing Education for Women (CEW)

For the first time, Continuing Education for Women (CEW) courses are being listed in the **Extension Classes Bulletin**.

Continuing Education for Women offers credit and noncredit classes designed to meet the needs and interests of students of all ages. *For information on CEW credit classes, see the preceding pages.* Anyone may register for CEW classes. There are no admission or entrance requirements; a high school diploma is not necessary. Students need only a desire to learn. Registration in specific programs or classes, however, may require prerequisite courses. For information on the Mucke/Roff Scholarship Fund established for students registering for courses through CEW, refer to page 49.

Registration

Unless otherwise noted, registration procedures, dates, and locations are the same as for credit registration fall, winter, and spring quarters. See the When and How to Register section of the Bulletin for details. Late registrations for credit classes must be accompanied by a late fee. See page 24. Effective fall 1984, late fees will be charged for CEW noncredit offerings.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

Late registration dates are listed with course descriptions for each noncredit class that does not begin the first week of the term. Credit classes begin the first week of the term, and follow regular late fee dates.

Books

In some cases students will be expected to purchase texts for classes. When the purchase of books is advised, those books will be available at the Minnesota Book Center in Williamson Hall on the East Bank campus of the University. See bookstore hours on page 29.

Noncredit Classes

Noncredit CEW classes cover the Arts and Humanities; Career Planning/Development/Self-Help; Literature/Writing; Mathematics/Computer Technology; and Social Science. They are scheduled for two to ten meetings and offer stimulating and challenging learning in lecture and discussion format with instructors and students.

Tuition

See course descriptions below for tuition charges for each course.

University employees who wish to take noncredit CEW classes must pay one-half the regular tuition plus fees (if any). You must submit a letter from your department head verifying employment when you register. For limited enrollment classes, registrations will be accepted starting the second week of mail registration. For nonlimited classes, students may register during the regular registration periods.

Persons 62 and older—registration information is given on page 48.

Arts and Humanities (begins page 444)

- 0100 Creativity: The Person, The Process, The Product
- 0101 Arts and Cultures of the Southwest American Indian
- 0102 How to Listen to Music
- 0103 Three Plays at the Guthrie
- 0104 Women in Three Arts
- 0105 Women's Spirituality
- 0106 Arts and Cultures of Mexico
- 0107 Great Cities: Berlin, Amsterdam, Greek Islands, Geneva
- 0108 Great Cities: Cuzco, Delhi, Jerusalem, Dakar
- 0109 Austria: Whence Its Character and Charm?
- 0110 Gods and Giants of Ancient Scandinavia
- 0111 Contemporary Views of American Life: The Social and Cultural Context of American Painting, 1875-1940
- 0112 Beginning Hebrew: Breaking the Ice
- 0113 New Worlds of Knowledge
- 0114 Good and Evil
- 0115 Search for Meaning: Voltaire, Nietzsche, Sartre
- 0116 Images of Viking Women in Art, Literature, and History
- 0117 Egypt: A 1000-Mile Journey Up the Nile

Career Planning/Development/Self-Help

(begins page 450)

- 0200 Blended Families: Living with Someone Else's Children
- 0201 Career Planning

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

- 0202 File...Don't Pile
- 0203 Investment Programs for People with Incomes of \$20,000 or Less
- 0204 Managing Personal Stress
- 0205 Parenthood Options: A Contemporary Choice
- 0206 Psychology of Relationships
- 0207 Relationship Communication
- 0208 Career Dilemmas of Women
- 0209 Caring Singles: Living Well in a Coupled World
- 0210 Conversationally Speaking
- 0211 French for Travelers
- 0212 Improving Your Memory: Remembering Names, Faces, and Information
- 0213 Resume Writing: Getting It Together
- 0214 Conflict of Psychological Dependency
- 0215 Study Skills
- 0216 Women Alone: Alive and Thriving
- 0217 Building Self-Esteem
- 0218 Gemstones: How Do I Know What I'm Buying?
- 0219 Mothers on Motherhood
- 0220 Assertiveness Training
- 0221 Investing for Tax Advantages
- 0222 Investments and Personal Financial Planning
- 0223 Volunteer Skills: Where Do They Fit?
- 0224 Taking Risks: A Woman's Dilemma
- 0225 Women and Depression
- 0226 Employment and the Woman Over Forty
- 0227 Filing Your Own Tax Forms
- 0228 Legal Rights of Women
- 0229 How to Prepare for Graduate Admissions Tests

Literature/Writing (begins page 459)

- 0300 Creative Writing
- 0301 Journal Writing
- 0302 Words: Making Them Work for You—Part I
- 0303 Contemporary Fiction by Women
- 0304 Winning Proposals: How to Write Them
- 0305 The Bronte World
- 0306 From *Faust* to *Steppenwolf*: Novels and Plays Translated from the German Language
- 0307 Writing Fiction for Young People
- 0308 Little Women Grow Up
- 0309 Sisters
- 0310 Women's Literature/Women's History
- 0311 Writing for Women's Magazines
- 0312 Introduction to Copy-editing
- 0313 Nonfiction Writing for Publication
- 0314 Writing a Book Proposal
- 0315 Perceiving Women: The Function of Language in Determining Our Identity
- 0316 Fiction Writing
- 0317 Words: Making Them Work for You—Part II

Mathematics/Computer Technology

(begins page 464)

- 0400 Arithmetic and Elementary Algebra
- 0401 Computers: A Practical Introduction

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

- 0402 Math Anxiety Diagnostic Clinic
- 0403 Is There a Computer in Your Future?
- 0404 Math Anxiety Support Group
- 0405 Putting Your Home Computer to Work for You
- 0406 Taking the Sting Out of Statistics: Statistics for Nonstatisticians

Social Science (begins page 467)

- 0500 Nuclear Militarism and Its Critics
- 0501 Economic Policy in a Presidential Campaign Season
- 0502 Middle East Kaleidoscope: The Quest for a Lasting Peace
- 0503 Philosophy, Science, and Religion: Conflict and Reconciliation
- 0504 Recognizing International Concerns of Women
- 0505 Minnesota's Rural Landscape

Arts and Humanities

- ★CEW 0100 **CREATIVITY: THE PERSON, THE PROCESS, THE PRODUCT.** No credit, \$46.

Creativity is the thinking energy behind all levels of thought and work. In music, science, art, mathematics, business, or invention, creativity is at the center of thought. Super intelligence has often been considered the only talent in creative thinking, but this exclusive point of view disregards varied levels of intelligence and the importance of personal experience in creativity. There is an ever-increasing interest by leaders in many fields about how to develop the creative process in more concrete ways. In these sessions we will examine the thought process of outstanding leaders in their fields (arts, sciences, invention, psychology) to discover the way they have created their new and original products. We will also develop in each member the techniques of improvement of not only more ideas but better ideas through readings, lectures, slides, puzzles, tapes, and discussions. (Limited to 40)

Winter Spec Term Sec 1 **Th**—6-8, Feb. 7-28

(4 meetings), NCEE Library, Nelson

No late fee through Jan. 31

(Robert Clark Nelson is associate professor of Art at the College of St. Catherine)

- CEW 0101 **ARTS AND CULTURES OF THE SOUTHWEST AMERICAN INDIAN.** No credit, \$62.

The ancient artistic traditions of America's Southwest Indian societies are admired world-wide for their beauty and craft. This survey (lectures, slides, tape recordings) presents Anasazi architecture, Navajo weaving, Pueblo pottery, Apache and Pima basketry, and Zuni jewelry within their cultural contexts—prehistoric phases through Spanish influence and recent history. Discussion of mythologies, rituals, and medical practices, and how they are manifested in art forms will offer clues to a different reality. Course has special appeal for collectors, travelers, and artists, and will include discussion of what constitutes fine quality in Indian art, new directions of contemporary artists, and suggestions for trips.

Fall Spec Term Sec 1 **T**—10 a.m.-12, Oct. 2-Nov. 6

(6 meetings), Plymouth Congregational

Church, Room 213, West,

1900 Nicollet Ave, Mpls

No late fee through Sept. 25

(Elizabeth H. West is a doctoral candidate in art history and anthropology at the University)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

★CEW 0102 HOW TO LISTEN TO MUSIC. No credit, \$70.

Composers, critics, conductors, and performers talk about how they approach music—listen to it, perform it, communicate about it. Sharpen your listening habits and knowledge of music at the side of the music-makers. The six-lecture series will encompass music from the Renaissance to the present day. Lecturers will include the Minnesota Orchestra's composers-in-residence, Libby Larsen and Stephen Paulus, program annotator Mary Ann Feldman, and special Orchestra Hall guests of the 1984 fall season. (Offered in cooperation with The Minnesota Orchestra. Limited to 65)

Fall Spec Term Sec 1 **W**—9:30 a.m.-11:30, Oct. 10-Nov. 14
(6 meetings), Orchestra Hall, Green Room,
1111 Nicollet Ave, Mpls
(enter through Stage Door on Marquette Ave),
Larsen, Paulus, Feldman
No late fee through Oct. 3

CEW 0103 THREE PLAYS AT THE GUTHRIE. No credit, \$33.

A study of three plays offered by the Guthrie Theater during its 1984-85 season: Chekhov's *Three Sisters*, Moliere's *Tartuffe*, and Shakespeare's *Twelfth Night*. We will consider basic principles of dramatic form and structure, identify different dramatic conventions and practices, view drama as literary form and as a public performance where the promise of the blueprint on the page is made tangible. We will deal with drama as a genre, and with the play's historical and social contexts, but the focus will be on the way the individual plays work, challenge, delight, and entrap. The theater is, after all, a calculated trap for meditation and celebration. (Offered in cooperation with the Guthrie Theater)

Fall Spec Term Sec 1 **W**—1-3, Oct. 31-Nov. 14
(3 meetings), MacP, Leyasmeyer
No late fee through Oct. 24

(Archibald Leyasmeyer is an associate professor in the Department of English)

CEW 0104 WOMEN IN THREE ARTS. No credit, \$62.

The artistic expression of women painters, composers, and writers from the Renaissance to the 20th century will be presented through slides, recordings, and poems. Explore the way women artists fit into their culture—who supported their work, how they became educated, how they created self-images and brought women's lives into art, how they combated discrimination, and the effect of modern feminism on the definition of art and female imagery. Students will have the option of writing their own creative responses to women's work.

Spring Spec Term Sec 1 **W**—1-3, Apr. 3-May 15
(7 meetings), MacP, Kriel

(Margot Fortunato Kriel is an adjunct faculty member of the Women's Studies Program and a published poet, playwright, and free-lance writer)

★CEW 0105 WOMEN'S SPIRITUALITY. No credit, \$58.

In the introduction to *The Female Experience*, historian Gerda Lerner asked, "What would history look like if it were seen through the eyes of women and ordered by the values they've defined?" Since 1970 a growing number of feminist theorists have been exploring this question as it applies to spirituality and religion seeking to discover the qualities of women's spiritual awareness. This course covers the central issues and major figures of this important area of feminist thought. Topics include

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

women and authority; women, body, and nature; spiritual dimensions of the female life cycle; resources of the goddess and wicca traditions. We will consider the contributions of Rosemary Ruether, Mary Daly, Judith Plaskow, Carol Christ, Naomi Oldenberg, and Penelope Washbourn. (Limited to 30)

Fall Spec Term Sec 1 **Th**—9 a.m.-11, Oct. 4-Nov. 8

(6 meetings), MacP, Everson

No late fee through Sept. 27

(Susan Corey Everson is a Ph.D. candidate in American Studies)

CEW 0106 ARTS AND CULTURES OF MEXICO. No credit, \$62.

The pre-Columbian art of America speaks to us of a colorful and chaotic past filled with continual power struggles, amazing adaptations, a developing complexity of belief systems—and a mesoamerican aesthetic that compares favorably for sheer brilliance of expression with any in the world. Artists Pablo Picasso and Louise Nevelson have drawn inspiration from the plastic forms of pre-Columbian Mexico, and much contemporary architecture reflects the influence of the ancient monuments. Mesoamerican art has become an integral part of our artistic heritage. Through lectures, slides, and tape recordings, this survey course discusses how the magnificent art and architecture, including painting and ceramics, of Mexico and Guatemala are manifestations of mythologies and religious practices, and monuments to expanding power. It also reveals intriguing pockets of culture that developed unique art forms unlike any other, many of which have become collectors' prizes today. Emphasis is placed on the exceptional contributions of the complex and sophisticated Classic Maya culture spread across southern Mexico and Central America and then mysteriously disappeared.

Winter Spec Term Sec 1 **M**—10 a.m.-12, Jan. 14-Feb. 18

(6 meetings), MacP, West

No late fee through Jan. 7

(Elizabeth H. West is a doctoral candidate in art history and anthropology at the University)

CEW 0107 GREAT CITIES: BERLIN, AMSTERDAM, GREEK ISLANDS, GENEVA. No credit, \$46; \$16 for single session.

Explore the history, art, architecture, and ambiance of four great cities—**Berlin, October 5; Amsterdam, October 12; Greek Islands, October 19; Geneva, October 26.** Find out where to stay, what to buy, where to eat, and what to see. Whether you are an armchair traveler or one bound for points abroad, experience the rich past and colorful present of these great cities through the lectures and slide presentations of experienced travelers.

Fall Spec Term Sec 1 **F**—9:30 a.m.-11:30, Oct. 5-26

(4 meetings), St. Paul College Club,

990 Summit Ave,

Hirschbach, Wakefield, King, Kheim

No late fee through Sept. 28

(Frank Hirschbach (Berlin) is professor and chair in the Department of German. Ray Wakefield (Amsterdam) is an assistant professor in German. Shannon King (Greek Islands) is a writer/photographer specializing in the arts and travel. Johanna Kheim (Geneva) has taught French and humanities at the University)

CEW 0108 GREAT CITIES: CUZCO, DELHI, JERUSALEM, DAKAR. No credit, \$46; \$16 for single session.

Explore the history, art, architecture, and ambiance of four great cities—**Cuzco, (continued next page)**

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noncredit courses

Peru, April 9; Delhi, India, April 16; Jerusalem, Israel, April 23; Dakar, West Africa, April 30. Find out where to stay, what to buy, where to eat, and what to see. Whether you are an armchair traveler or one bound for points abroad, experience the rich past and colorful present of these great cities through the lectures and slide presentations of experienced travelers.

Spring Spec Term Sec 1 T—9:30 a.m.-11:30, Apr. 9-30
(4 meetings), MacP, West, Asher,
Nelson, Kaba
No late fee through Apr. 2

(Elizabeth West (Cuzco) is a doctoral candidate in art history and anthropology. Catherine Asher (Delhi) is an adjunct professor of art at Hamline University. Robert Clark Nelson (Jerusalem) is associate professor of art at the College of St. Catherine. Lansine Kaba (Dakar) is professor and chair in the Department of Afro-American and African Studies)

CEW 0109 AUSTRIA: WHENCE ITS CHARACTER AND CHARM? No credit, \$30 non-members; \$25 Volksfest members.

Through slides, video, performance, and discussion you will discover that Austria's geographical location has given it special possibilities and responsibilities. As a small country in the center of Europe, it has been subject to numerous and divergent influences. It is a country, however, that cherishes its own valuable heritage as it grows out of the past and into the future. Profiles of some of Austria's outstanding public figures will spotlight their profound effects upon its past, present, and future. Vocal performance and discussion demonstrate the assimilation of artistic styles from other countries, and video tapes point out America's image of Austria.

Fall Spec Term Sec 1 T—7:30-9, Nov. 13-Dec. 4
(4 meetings), Volksfest Kulturhaus,
301 Summit Ave, StP,
Mahady, Marboe, Sutton, Wright
No late fee through Nov. 6

(Trudy Mahady, a native Austrian, is a teacher of language for the Volksfest Association of Minnesota. Peter Marboe is the director of the Austrian Cultural Institute in New York. Vern Sutton is the director of the University of Minnesota Opera Workshop and a well-known Upper Midwest performing artist. William E. Wright is a professor of Modern European and Austrian History, and director of the Center for Austrian Studies at the University)

CEW 0110 GODS AND GIANTS OF ANCIENT SCANDINAVIA. No credit, \$60.

When the ancestors of modern Scandinavians, Germans, Englishmen, and other Germanic nations became Christians, they lost their ancient religion, but it lingered for centuries as popular folklore. A few remnants of old myths were preserved in written form in England and Germany, but only Scandinavian myths were saved on a large scale in Icelandic sagas, the poetic *Edda*, and in a number of other monuments (skaldic poetry, Snorre's *Edda*). This course addresses itself to the rich tradition of the Scandinavian Middle Ages and to modern Scandinavian folklore. A series of six lectures recreate the unique world of the ancient Scandinavian gods, their dramatic fight with giants, and the whole atmosphere of the pre-Christian civilization that made this pantheon possible.

Spring Spec Term Sec 1 Th—10 a.m.-12, Apr. 11-May 16
(6 sessions), MacP, Liberman
No late fee through Apr. 4

(Anatoly Liberman is a professor in the Department of German)

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CEW 0111 CONTEMPORARY VIEWS OF AMERICAN LIFE: THE SOCIAL AND CULTURAL CONTEXT OF AMERICAN PAINTING, 1875-1940. No credit, \$60.

American artists of the late 19th century and early 20th century were often keenly aware of the forces of social and cultural change evident in a rapidly industrialized and urbanized America. This course aims to understand how artists responded to new forces in American life by examining the visual record found in their canvases and choice of subject matter. Themes gleaned from these canvases and examined during the course include the impact of urbanization on the values of a once rural America, the closing of the frontier, challenges posed by modern scientific theories, immigration and urban ghettoization, the impact of the First World War, the jazz age, and the Great Depression. (Offered in cooperation with Walker Art Center)

Fall Spec Term Sec 1 **Th**—1-3, Oct. 4-Nov. 8
(6 meetings), Walker Art Center,
Vineland Place, Mpls, Gambone
No late fee through Sept. 27

(Robert Gambone is a Ph.D. candidate in Art History and American Studies)

CEW 0112 BEGINNING HEBREW: BREAKING THE ICE. No credit, \$62.

A low-keyed, enjoyable introduction to Hebrew. Suitable for further study of either Biblical Hebrew or Modern Israeli Hebrew. Teaches the reading of the Hebrew alphabet, correct pronunciation, basic vocabulary. Hebrew songs and folk sayings will be used to practice reading and pronunciation.

Spring Spec Term Sec 1 **M**—1-3:30, Apr. 1-29
(5 meetings), MacP, Paradise

(Jonathan Paradise is associate professor of Hebrew and is a specialist in the Hebrew text of the Bible and modern approaches to Biblical studies)

CEW 0113 NEW WORLDS OF KNOWLEDGE. No credit, \$66.

An introductory inquiry into relevant concerns, values, and challenges in the arts, the sciences, and the social sciences. **Feb. 7** (Evans): *How Doing Women's History Changes Our Perspective*. **Feb. 14** (Tapp): *Human Rights: Ambiguous Concept, Ambiguous Weapon*. **Feb. 21** (Nelson): *The Role of Intuition and Insight in the Creative Process*. **Feb. 28** (Shapiro): *Genetics and Human Disease*. **Mar. 7** (Lukermann): *Geography: Social Science or Humanities?* **Mar. 14** (Root): *Plato and Milton Friedman: Different Perspectives on the Good Life*.

Winter Spec Term Sec 1 **Th**—10 a.m.-12, Feb. 7-Mar. 14
(6 meetings), MacP
No late fee through Jan. 31

(Sara Evans is an associate professor in the Department of History. Robert Tapp is a professor in Humanities and Fine Arts and the Religious Studies Program. Robert Clark Nelson is associate professor of art at the College of St. Catherine. Burton Shapiro is a professor in the Department of Oral Biology. Fred Lukermann is professor and dean, College of Liberal Arts. Michael Root is an associate professor in the Department of Philosophy)

CEW 0114 GOOD AND EVIL. No credit, \$60.

Reflect upon those human motives and states of character, as well as arrangements in the natural world, which call forth our highest praise and our most vehement condemnation. Look at some particular problems for human self-understanding and for moral theory building: how do we come to terms with the world that contains

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noncredit courses

cruelty and kindness, arrogance and love, violation and nurturance? We will also think about the relationship between extreme moral judgments and our "milder" moral vocabulary: how do we understand morality, given that morality includes this range of judgments?

Winter Spec Term Sec 1 **Th**—10 a.m.-12, Jan. 24-Feb. 28
(6 meetings), MacP, Shea
No late fee through Jan. 17

(Peter Shea is a community faculty member at Metro State University)

CEW 0115 SEARCH FOR MEANING: VOLTAIRE, NIETZSCHE, SARTRE. No credit, \$58.

Have you occasionally asked yourself, What is the meaning of life? How can one best live one's life? Is there a God, and if not, what then? Then you are interested in philosophy. This course is an introductory study of three famous philosophers spanning the last three centuries. Each wrote a novel expressing his philosophical views, so that rather than reading their more rigorous philosophical writings, we can approach them from a more accessible avenue. The philosophers and works are *Candide* by Voltaire (18th century); *Thus Spoke Zarathustra* by Nietzsche (19th century); and *Nausea* by Sartre (20th century). It is hoped that through these works students will enjoy an understanding, not only of the ideas of these philosophers, but also how close to our own lives the great questions of philosophy can be.

Spring Spec Term Sec 1 **M**—10 a.m.-12, Apr. 1-May 13
(7 meetings), MacP, Tysdal-Crawford

(Claudia Tysdal-Crawford is a Ph.D. candidate in Comparative Literature)

CEW 0116 IMAGES OF VIKING WOMEN IN ART, LITERATURE, AND HISTORY. No credit, \$52.

Examine what is known about Viking women from many different sources. Visual sources include representations of women in art and archeological information about dress, hair, and jewelry styles. Consider literary representations of women in the mythological Eddas and in the later Icelandic sagas. Accounts about northern women and society by early European historians will serve as a prelude to the study of Viking society, and runestones and writings by missionaries and travelers in Scandinavia will be primary sources on the Viking period itself.

Winter Spec Term Sec 1 **F**—9:30 a.m.-11:30, Jan. 18-Feb. 22
(6 meetings), MacP, Hatch
No late fee through Jan. 11

(Nancy Hatch is a doctoral candidate in the Center for Ancient Studies)

CEW 0117 EGYPT: A 1000-MILE JOURNEY UP THE NILE. No credit, \$16.

A lecture and slide show based upon the history of Egypt seen through its unique art. The first hour is a presentation on the history of the Egyptian world and its religion, culture, and government. The lecture includes the writings, gods, tombs, and temples of this oldest of all continuing civilizations. The second hour is devoted to a 12-projector slide show using three screens, music, narration, and sound effects. The show begins with the first pharaoh, Narmer, and concludes with the last pharaohs of the Roman period.

Winter Spec Term Sec 1 **Th**—1:30-3:30, Mar. 7
(1 meeting),
St. Paul College Club, Great Hall,
990 Summit Ave, Nelson
No late fee through Feb. 28

(Robert Clark Nelson is associate professor of art at the College of St. Catherine)

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Career Planning/Development/Self-Help

★CEW 0200 **BLENDED FAMILIES: LIVING WITH SOMEONE ELSE'S CHILDREN.** No credit, \$62 per person; \$104 per couple.

The blended family is a household of adults and children brought together by choice rather than biology. This course is designed for men and women who are members of blended households. Presentations explore the significant differences between biological and blended families, identify some of the common problems in blended households, and suggest approaches for identifying and resolving them. Class members participate in discussions and are encouraged to apply ideas in their blended families. (Limited to 50)

Spring Spec Term Sec 1 **W**—6:30-9, Apr. 3-May 8
(6 meetings), FordH 70, Brandes

(Annette T. Brandes, Ph.D., sociology and education, is a self-employed social systems consultant and free-lance writer)

★CEW 0201 **CAREER PLANNING.** No credit, \$65 plus \$10 course fee. Total \$75.

Have you decided on a career goal? This class is for women who want to develop strategies for setting successful career goals. Participants receive help in developing individual career plans through lectures, interest testing, and the use of self-evaluation techniques. They learn decision-making and goal-setting skills to help select or change careers. Students identify existing and potential occupational skills and interests, and learn how to research jobs, identify available and alternative positions, and present themselves professionally. (Limited to 25)

Fall Spec Term Sec 1 **M**—6:30-8:30, Oct. 1-29
(5 meetings), Walker Library,
2880 Hennepin Ave S. Mpls, Emerson
No late fee through Sept. 24

Sec 2 **W**—9:30 a.m.-11:30, Oct. 3-31
(5 meetings), MacP, Peterson
No late fee through Sept. 26

Spring Spec Term Sec 3 **T**—6:30-8:30, Apr. 2-30
(5 meetings), Highland Park Library,
1974 Ford Pkwy, StP, Weeks

(Nadine Emerson, licensed psychologist, is a counselor at Muscala, Emerson and Associates. Sue Peterson is a counselor in the Continuing Education and Extension Counseling Department and is a licensed psychologist. Carol Weeks is a career counselor at Macalester College)

★CEW 0202 **FILE...DON'T PILE.** No credit, \$25 plus \$3 course fee. Total \$28.

A simple and unique filing system presented in an enjoyable workshop setting. It is especially useful for those who clip and save ideas, articles, patterns, poems, quotes, notes, and recipes, and then spend months trying to find them again. Through participation in demonstrations, class members become acquainted with the system, then apply the technique to their personal needs with individual direction from the instructor. *All registrations must include a self-addressed, stamped envelope to*

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receive necessary information for the first day of class. Suggested reading: *File... Don't Pile* by Pat Dorff (available at most local bookstores). (Limited to 25)

Fall Spec Term Sec 1 **T**—6-8:30, Oct. 2-16
(3 meetings), St. Louis Park Jewish
Community Center,
4330 Cedar Lake Rd, Dorff
No late fee through Sept. 25

Spring Spec Term Sec 2 **Th**—9:30 a.m.-12, Apr. 11-25
(3 meetings), MacP, Dorff
No late fee through Apr. 4

(Patricia Dorff has a master's degree in library science)

★CEW 0203 INVESTMENT PROGRAMS FOR PEOPLE WITH INCOMES OF \$20,000 OR LESS. No credit, \$22.

If it takes money to make money, how can smaller investors get the most for their investment? This course covers the basics of saving and investing for middle-income people, including money market funds and how to select one, how to go about investing in stocks, and tax strategies. (Limited to 40)

Fall Spec Term Sec 1 **Sa**—10 a.m.-1, Nov. 3
(1 meeting), Washburn Library,
5244 Lyndale Ave S, Mpls,
Whittlinger
No late fee through Oct. 26

(Erica Whittlinger is a corporate financial consultant who has a private financial consulting practice. She teaches in the graduate program in management at the College of St. Thomas)

★CEW 0204 MANAGING PERSONAL STRESS. No credit, \$20.

A workshop to help participants identify and define the stressful aspects of their personal lives including pressure, frustration, and conflict. Students examine factors that influence the intensity of stress, negative responses to stress, and why people resort to them, and discuss the physical and emotional aspects of stress. Two major techniques for altering response to stress will be presented. (Limited to 30)

Spring Spec Term Sec 1 **Sa**—9 a.m.-12, Apr. 27
(1 meeting), NCCE 140, Emerson
No late fee through Apr. 19

(Nadine Emerson, licensed psychologist, is a counselor at Muscala, Emerson and Associates)

★CEW 0205 PARENTHOOD OPTIONS: A CONTEMPORARY CHOICE. No credit, \$48 per person; \$68 per couple *(includes box lunch)*.

To have—or not to have—children is the subject of this workshop. Women and men, singles or couples, interested in the issues concerning the childbearing decision will have an opportunity to explore relevant research findings and to share feelings. Dr. Thoen will report on her childfree lifestyles research, demonstrate a scale developed for measuring commitment to remaining childfree, and critically review selected literature on the topic. Discussion subjects include children's impact on husband/wife relationships, life cycle implications, and the decision-making process. Film, lecture, and small-group discussion will aid in exploring issues. Class also suitable for professionals who counsel family planning. (Limited to 40)

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Winter Spec Term Sec 1 **Sa**—9 a.m.-4, Feb. 9
(1 meeting), NCCE 140, Thoen
No late fee through Feb. 1

(Gail Ann Thoen is an assistant professor of psychology and family studies at the University of Minnesota, and a marriage and family therapist in private practice)

★CEW 0206 PSYCHOLOGY OF RELATIONSHIPS. No credit, \$44 (includes box lunch).

For many of us, romantic relationships are the mainspring of our emotional lives. When these relationships are unsatisfying, other areas of our lives may become affected. This seminar examines what draws us into relationships, why they turn out as they do, and what we can do to improve them. The ideas of psychologists on relationships will be presented, plus some reflections on the similarities and differences between men and women, how men and women see their roles, sexuality, and partners. (Limited to 25)

Winter Spec Term Sec 1 **Sa**—9 a.m.-3, Jan. 12
(1 meeting), NCCE 140, Dorset
No late fee through Jan. 4

(Barbara Dorset is a licensed consulting psychologist in private practice and an adjunct assistant professor in the Department of Psychology)

★CEW 0207 RELATIONSHIP COMMUNICATION. No credit, \$23.

One of the most important aspects of any interpersonal relationship is communication. This workshop helps participants gain a greater understanding of communication in the context of relationships and become more aware of their own communication styles. The focus is on male and female communication styles, clear and open communication, the role of conflict in relationships, and strategies for productive uses of conflict. (Limited to 35)

Fall Spec Term Sec 1 **Th**—6-8, Oct. 4-11 (2 meetings),
NCCE 229, Kolman
No late fee through Sept. 27

(Anita Sue Kolman, Ph.D., sociology, is an assistant professor at Augsburg College)

★CEW 0208 CAREER DILEMMAS OF WOMEN. No credit, \$20.

Why does one choose a particular career? What influences that decision? This workshop is designed to help women examine the social and personal demands and life expectations that influence their career choices. Includes values clarification, exploration of real interests, and how to ask for and expand your support base. Lecture and small-group exercises. (Limited to 35)

Winter Spec Term Sec 1 **Sa**—9 a.m.-12, Jan. 19
(1 meeting),
NCCE 140, Emerson
No late fee through Jan. 11

(Nadine Emerson, licensed psychologist, is a counselor at Muscala, Emerson and Associates)

★CEW 0209 CARING SINGLES: LIVING WELL IN A COUPLED WORLD. No credit, \$40 per person; \$65 per couple.

A seminar for singles, open to men and women, who want to explore components of healthy, dynamic, and rewarding intimate relationships. The aim of the program is to emphasize positive aspects of friendships and loving partnerships in nonmarital

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relationships. Discussions include how to give and receive love; being comfortable with your own sexuality; commitment vs. autonomy; aloneness vs. loneliness; making, keeping, and letting go of friendships. There will be an opportunity to interact with a panel of single, caring role models in various nonmarital relationships. The seminar is designed as an educational experience, not a therapy group. (Limited to 26)

Spring Spec Term Sec 1 T—6:30-8:30, Apr. 2-16
(3 meetings),
NCCE Library, Thoen

(Gail Ann Thoen is an assistant professor of psychology and family studies at the University of Minnesota, and a marriage and family therapist in private practice)

★CEW 0210 CONVERSATIONALLY SPEAKING. No credit, \$33.

A course dealing with effective and ineffective conversational patterns. It focuses on analysis of others' conversation, and also on how to improve our own communication. We will examine conversational strategies that communicate positive feelings, deal with criticism, deal with rejection, assist in saying no when we need to, and nonverbal aspects of conversation. Emphasis on experiential and practical learning. (Limited to 25)

Spring Spec Term Sec 1 W—9 a.m.-11, Apr. 3-17
(3 meetings), MacP, Martin

(Judith N. Martin, Ph.D., speech-communication, is an assistant professor in the International Student Advisers Office, University of Minnesota)

★CEW 0211 FRENCH FOR TRAVELERS. No credit, \$68.

Emphasis on vocabulary most helpful for travelers. Learning about French culture and customs makes travel more adventurous and more economical. The course is designed for those who have had some French or have forgotten almost everything. It includes some grammar, but concentrates on acquiring the tools necessary to express oneself as well as possible with as little as possible. (Limited to 20)

Spring Spec Term Sec 1 T—1-3, Apr. 2-May 21
(8 meetings), MacP, Kheim

(Johanna Kheim has taught French and humanities at the University of Minnesota)

★CEW 0212 IMPROVING YOUR MEMORY: REMEMBERING NAMES, FACES, AND INFORMATION. No credit, \$42.

A good memory is vitally important in all areas of a person's life. A poor memory can cause stress or lack of self-confidence, or be a stumbling block for promotion and advancement. This course covers both the theoretical background for understanding what makes us remember and forget, and the practical application of several well-known techniques for remembering names, faces, objects, lists, stories, and information. (Limited to 24)

Spring Spec Term Sec 1 W—6:30-8:30, Apr. 3-24
(4 meetings),
NCCE Library, Lundeberg

(Mary Lundeberg is a counselor and instructor in the Reading and Study Skills Center at the Student Counseling Bureau)

★CEW 0213 RESUMÉ WRITING: GETTING IT TOGETHER. No credit, \$23 class only; \$38.95 includes optional ½-hour individual resumé critique.

A workshop designed to meet the needs of women re-entering the job market,
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noncredit courses

changing fields, or for those wanting to update their resumés. It is appropriate for those seeking their first paid position, a promotion, or a move from the nonprofit to the business climate. Participants learn a variety of forms to employ when writing a positive resumé. They study examples of chronological, functional, and combination forms of resumés. Typical resumé pitfalls are discussed. Students also learn how to market the skills they possess. At the conclusion of the workshop, students may arrange an optional ½-hour individual resumé critique with the instructor. (Limited to 25)

Spring Spec Term Sec 1 **Th**—6-8, Apr. 11, 18
(2 meetings), NCCE 229, Peterson
No late fee through Apr. 4

(Sue Peterson is a counselor in Continuing Education and Extension Counseling and a licensed psychologist)

★CEW 0214 CONFLICT OF PSYCHOLOGICAL DEPENDENCY. No credit, \$42.

The conflict of psychological dependency is an ongoing struggle toward personal freedom in today's society. This course examines attitudes and behaviors that are dependency based. Original sources/persons for these dependencies (which can include dependency on others, or work or food) are discussed. Healthy and unhealthy patterns of dependency are identified. Emphasis is placed on developing strategies for wellness and on devising methods for ending or preventing unhealthy dependencies. (Limited to 20)

Fall Spec Term Sec 1 **M**—9:30 a.m.-11:30, Oct. 1-22
(4 meetings), MacP, Brodie
No late fee through Sept. 24

(Jane Brodie is a licensed consulting psychologist in private practice with Psychological Associates, Inc.)

★CEW 0215 STUDY SKILLS. No credit, \$20.

Thinking about returning to school? About to begin your first class? Already in school and having problems with your studies? This seminar offers techniques on budgeting your time, developing efficient study habits, getting the most from lectures and textbooks, taking and organizing notes, studying for exams, and taking exams. The seminar includes lecture, classroom discussion, and practical exercises. (Limited to 25)

Fall Spec Term Sec 1 **W**—9 a.m.-1, Sept. 12
(1 meeting), MacP, DeNoble
No late fee through Sept. 5

(Jan DeNoble is a teaching specialist in the Reading and Writing Skills Center)

CEW 0216 WOMEN ALONE: ALIVE AND THRIVING. No credit, \$56 (includes suppers).

A supper seminar for women who are on their own: separated, divorced, never married, widowed, or living apart from their spouses because of dual-career work commitments. The aim of the program is to emphasize the positive aspects of being single and the many joys and opportunities available in today's society for single women. Discussion includes loneliness, networking, making friends, being comfortable with your own sexuality. There will be opportunity to interact with a panel of single role models. The seminar is designed as an educational experience, not a therapy group.

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Fall Spec Term Sec 1 T—5:30-9, Oct. 16-30
(3 meetings), Cherrywood Room,
StCen, StP Campus, Thoen
No late fee through Oct. 9

(Gail Ann Thoen is assistant professor of psychology and family studies at the University of Minnesota, and a marriage and family therapist in private practice)

★**CEW 0217 BUILDING SELF-ESTEEM.** No credit, \$42.

Self-esteem derives from a sense of personal efficacy and personal worth. The nature of this self-evaluation has profound effects on your cognitions, feelings, motivations, goals and behavior. Low self-esteem may manifest itself in depression, self-derision, self-denial, destructive relationships, excessive guilt and worry, or addictive behaviors. The aim of this course is to help you identify and break harmful patterns that stifle your capacity for achieving a productive life. Through lectures, discussions, group support, and activities you will learn specific steps for increasing self-acceptance, developing confidence, setting and achieving realistic goals, and overcoming barriers to change. (Limited to 20)

Spring Spec Term Sec 1 M—9:30 a.m.-11:30, Apr. 29-May 20
(4 meetings), MacP, Brodie
No late fee through Apr. 22

(Jane Brodie is a licensed consulting psychologist in private practice with Psychological Associates, Inc.)

★**CEW 0218 GEMSTONES: HOW DO I KNOW WHAT I'M BUYING?** No credit, \$33.

What are gems? What are the pros and cons of using gemstones as an investment? This class helps you become an informed buyer. Topics include how to tell a valuable stone from a poor one; what to look for in quality stone; how to understand the terminology; and the history of gems. Guest speaker is a gem dealer, goldsmith, and appraiser. (Limited to 25)

Spring Spec Term Sec 1 T—6:30-8:30, May 7-21
(3 meetings),
NCCE Library, Heuer
No late fee through Apr. 30

(Marilyn Zutz Heuer is studying to become a gemologist and is a member of Retail Jewelers of America)

★**CEW 0219 MOTHERS ON MOTHERHOOD.** No credit, \$48.

We will compare the institution of motherhood with the experience women of various races, classes, and times have written of in autobiographies, essays, poems, stories, and songs. Class members will be encouraged to share their insights and experiences as we look at the value and limitations of motherhood, and conflicts affecting career, identity, and relationships. For mothers of all ages and women considering becoming mothers. (Limited to 15)

Spring Spec Term Sec 1 W—7-9, Apr. 3-May 8
(6 meetings) Washburn Library,
5244 Lyndale Ave S, Mpls,
Remington

(Judy Remington, M.A., mother of two, and literary critic/reviewer, has been studying American motherhood for several years, has published articles on the subject, and is preparing to write a book about it)

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★CEW 0220 ASSERTIVENESS TRAINING. No credit, \$46.

Becoming assertive means not only standing up for one's rights in negative, confrontative situations, but also being able to express beliefs, feelings, and opinions in an honest, open, and appropriate way. This course will help you increase communication skills while reducing anxiety and feelings of resentment and guilt. Learn what distinguishes assertive behavior from both passive and aggressive behavior. 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 W—10 a.m.-12, Oct. 3-31
(5 meetings), MacP, Emerson
No late fee through Sept. 26

(Nadine Emerson, licensed psychologist, is a counselor at Muscala, Emerson and Associates)

★CEW 0221 INVESTING FOR TAX ADVANTAGES. No credit, \$18 one session per person; \$33 per couple. \$36 two sessions per person; \$66 per couple.

Learn how to use tax-advantaged investments to reduce your taxes and shelter your income. The first session covers basic tax-exempt and tax-deferred income sources including IRAs, tax-free money market funds, municipal bonds, exempt stock dividends, annuities, and company savings plans. Session two will cover how the most common tax-sheltered investments, such as real estate, oil, and gas, work with emphasis on evaluating the programs. Individuals may attend one or both sessions depending on their interest in and knowledge of the two areas of tax shelters. (Limited to 40)

Winter Spec Term Sec 1 Sa—9 a.m.-12, Mar. 9, 16
(2 meetings),
NCCCE 140, Whittlinger
No late fee through Mar. 1

(Erica Whittlinger is a corporate financial consultant, has a private financial consulting practice, and teaches in the graduate program in management at the College of St. Thomas)

CEW 0222 INVESTMENTS AND PERSONAL FINANCIAL PLANNING. No credit, \$46; \$16 for single session.

Designed especially for women, this seminar covers fundamental issues of sound financial management planning. Intended for both the novice and experienced investor, this series emphasizes concepts to help you better manage and control your financial future. You may register for the series or individual sessions. **October 4:** Erica Whittlinger. *Financial Management Process.* Taking your financial inventory, personal budgeting and planning, determining goals and objectives for investment, retirement, future expenditures, and cash control procedures. **October 11,** Andrea Stanchfield Childs. *Wills, Estates, Trusts.* The best way to preserve and protect your assets to minimize estate taxes and make certain your wishes are fulfilled. **October 18,** Erica Whittlinger. *Income-Oriented Investments.* Money-market funds, bonds, preferred stocks, municipal bonds, bond funds, GNMA trusts, and growth investment. **October 25,** Erica Whittlinger. *Tax Management.* Tax-exempt and tax-deferred income sources. How tax sheltered investments work, such as real estate and oil and gas, with emphasis on evaluating the programs. (Offered in cooperation with the Woman's Club of Minneapolis)

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Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

Fall Spec Term Sec 1 **Th**—9:30 a.m.-12, Oct. 4-25
(4 meetings), Woman's Club of Minneapolis,
410 Oak Grove St,
Whittlinger, Childs
No late fee through Sept. 27

(Erica Whittlinger is a corporate financial consultant who has a private financial consulting practice. She teaches in the graduate program in management at the College of St. Thomas. Andrea Stanchfield Childs, J.D., is a personal financial planner)

★**CEW 0223 VOLUNTEER SKILLS: WHERE DO THEY FIT?** No credit, \$20.

Could you be selling yourself short as a job seeker? This course helps participants examine past and current volunteer and community work experiences, and identify marketable skills. Students also will learn how to promote these skills effectively in resumés and during job interviews. (Limited to 30)

Winter Spec Term Sec 1 **Sa**—9 a.m.-12, Feb. 16
(1 meeting),
NCCE 140, Emerson
No late fee through Feb. 8

(Nadine Emerson, licensed psychologist, is a counselor at Muscala, Emerson and Associates)

★**CEW 0224 TAKING RISKS: A WOMAN'S DILEMMA.** No credit, \$46.

An introductory course designed to define and describe risk-taking, and increase awareness of the cognitive and psychological factors related to taking risks. Strategies for evaluating benefits and penalties associated with risk-taking in various life situations are explored through lecture, class discussions, and participation in class exercises for positive-outcome risk-taking. (Limited to 30)

Fall Spec Term Sec 1 **W**—6-8, Oct. 3-31
(5 meetings),
NCCE Library, Wood
No late fee through Sept. 26

(Gloria Wood is a psychologist working as a counselor in the General College at the University)

★**CEW 0225 WOMEN AND DEPRESSION.** No credit, \$58.

From the popular press to scholarly journals, the widespread problem of depression in women is increasingly a topic of attention and controversy. Drawing from the disciplines of psychology, psychiatry, biology, and sociology, this course explores interpersonal, cognitive, and biological theories which have been put forward to explain the great vulnerability women appear to have to depression relative to men. We will discuss what depression is in the context of other mood states and examine current treatment approaches. (Limited to 35)

Fall Spec Term Sec 1 **M**—6-8, Sept. 24-Oct. 29,
(6 meetings),
NCCE 235, Lumry

(Ann E. Lumry, Ph.D., is a licensed consulting psychologist, Department of Psychiatry, St. Paul-Ramsey Medical Center)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

CEW 0226 EMPLOYMENT AND THE WOMAN OVER FORTY. No credit, \$42.

An exploration of some of the realities and problems in the situation of the employed mid-life woman, and some possible ways of coping with them. Four main areas will be explored: (1) demographic and economic factors; (2) interpersonal relationships, on and off the job; (3) psychological influences on performance, priorities and goals; (4) physical and psychological considerations.

Spring Spec Term Sec 1 **W**—6:30-8:30, Apr. 24-May 15

(4 meetings),

NCCE 235, Campbell

No late fee through Apr. 17

(Shirley Campbell, ACSW, Ph.D., is a licensed psychologist in private practice)

CEW 0227 FILING YOUR OWN TAX FORMS. No credit, \$35.

Come to a nuts and bolts, hands-on workshop designed to teach you how to fill out those federal and state tax forms. We'll talk about what law changes might affect you as well as take you through the process of data gathering right down to the number of copies you make before mailing. The tax forms covered are all those that an average individual would need as well as a question-and-answer period for more exotic problems.

Winter Spec Term Sec 1 **Sa**—10 a.m.-12, Jan. 26-Feb. 2

(2 meetings),

NCCE 140, Johnson

No late fee through Jan. 18

(Judith M. Johnson, C.P.A., J.D., is an instructor in the accounting department, School of Management, and an attorney in private tax practice)

CEW 0228 LEGAL RIGHTS OF WOMEN. No credit, \$33.

Includes a discussion of women's legal rights at work and at home, women on their own or in families, women in business, and legal issues relating to credit and owning property.

Fall Spec Term Sec 1 **T**—6:30-8:30, Oct. 2-9

(2 meetings),

NCCE 235, Wolf and Roback

No late fee through Sept. 25

(Judith M. Wolf and Donna L. Roback are attorneys and partners in the firm of Roback and Wolf specializing in the areas of family law and employment law)

★CEW 0229 HOW TO PREPARE FOR GRADUATE ADMISSIONS TESTS. No credit, \$32 plus \$7 special fee. Total \$39.

Designed for students preparing to take the Graduate Record Examination (GRE), or the Graduate Management Admissions Test (GMAT). The morning session covers general test-taking skills as well as a review of the various types of verbal questions presented on each of the tests. The afternoon session includes a review of basic mathematics and quantitative reasoning skills, with ample opportunity to practice typical test problems. There is some small-group work as well as a test simulation exercise. (Limited to 40)

Fall Spec Term Sec 1 **Sa**—9 a.m.-4, Sept. 22

(1 meeting),

NCCE 140, Byrne

No late fee through Sept. 14

(Joan Byrne is director of independent study at Metropolitan State University)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Literature/Writing

★CEW 0300 CREATIVE WRITING. No credit, \$63.

A workshop for both new and experienced writers of prose: fiction, journal writing, memoir, and creative essay. The class encourages students to discover how to best write about their life, feelings, and thoughts. Exercises are given to generate raw material, experiment with different voices, and polish and play with language. Students' writing will be read and discussed in class—as well as selected prose by contemporary writers. The aim is to enjoy the satisfaction of writing while developing style and technique. (Limited to 15)

Fall Spec Term Sec 1 **Th**—1-3, Oct. 4-Nov. 15
(7 meetings), MacP, Perry
No late fee through Sept. 27

(Susan Perry is a full-time free-lance writer. She has written articles for more than 100 magazines and newspapers and is the author of 11 children's books)

★CEW 0301 JOURNAL WRITING. No credit, \$48.

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 classes. Students read Tristine Ranier's *The New Diary*. (Limited to 20)

Fall Spec Term Sec 1 **W**—1-3, Oct. 3-Nov. 7
(6 meetings), MacP, Mucke
No late fee through Sept. 26

(Edith Mucke, assistant professor, is a former director of Continuing Education for Women)

★CEW 0302 WORDS: MAKING THEM WORK FOR YOU—PART I. No credit, \$33.

Designed for all people who want to increase their vocabulary and who enjoy working and playing with words. The class includes Greek and Latin roots, words derived from these roots, and other useful word games. Appropriate for people who want to expand their vocabulary beyond professional jargon, and also for those planning to take undergraduate or graduate admissions exams or other tests requiring vocabulary skills. (Limited to 25)

Winter Spec Term Sec 1 **W**—12-1, Jan. 16-Mar. 6
(8 meetings), MacP, DeNoble
No late fee through Jan. 9

(Jan DeNoble is a teaching specialist in the Reading and Writing Skills Center)

See Part II of this Course listed on page 464.

CEW 0303 CONTEMPORARY FICTION BY WOMEN. No credit, \$48.

Not certain what good books to add to your reading list? Study with us what will be a sampling of some of the best contemporary fiction by women writers. The works we focus on will depend partly on the interests and previous reading background of class members, but will include some of the following: Anne Tyler's *Searching for Caleb*, Alice Walker's *The Color Purple*, Barbara Pym's *Excellent Women* (or perhaps *Jane and Prudence*), Rebecca Hill's *Blue Rise*, or Mary Gordon's *The Company of Women*. Class discussion centers around such questions as what sorts of personal

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noncredit courses

relationships does each writer explore, and what possibilities and limitations does she see in them? How well does each work fit into traditional notions of what women can and should write about? How "political" is each writer? What are the central problems facing female protagonists, and what solutions, if any, are offered?

Winter Spec Term Sec 1 M—9 a.m.-11, Feb. 11-Mar. 18

(6 Meetings), MacP, Miller

No late fee through Feb. 4

(Carol Miller is an assistant professor teaching writing and literature in the General College)

★CEW 0304 WINNING PROPOSALS: HOW TO WRITE THEM. No credit, \$45 plus \$3 course fee. Total \$48.

A one-day seminar on writing successful proposals. Provides a basic how-to-do-it approach applicable to the first-time grant writer or the seasoned proposal-writing professional interested in some fresh approaches. The course covers capture strategies, innovative vs. conservative writing methods, and the politics of winning contracts. A booklet on proposal creation and persuasive writing is provided as a part of the course. (Limited to 30)

Winter Spec Term Sec 1 Sa—9 a.m.-4, Mar. 23

(1 meeting),

NCCE 140, Stevens

No late fee through Mar. 15

(Susan Stevens is a management consultant for small businesses and nonprofit agencies with Stevens and Associates)

CEW 0305 THE BRONTË WORLD. No credit, \$47.

The class examines the relationships between the lives and the literature of Charlotte, Emily, and Anne Brontë. Powerless as daughters, as sisters to Branwell, as dependent and plain women, they were powerful in their art. They transformed their desolate landscape and constrained lives and offered new feminist myths of power and liberation from captivity. Students should read the first half of *The Tenant of Wildfell Hall* by Anne Brontë by the first class session.

Fall Spec Term Sec 1 M—1-3, Sept. 24-Oct. 22

(5 meetings), MacP, Wadman

(Karen Wadman has been an adjunct instructor in the Department of English)

CEW 0306 FROM FAUST TO STEPPENWOLF: NOVELS AND PLAYS TRANSLATED FROM THE GERMAN LANGUAGE. No credit, \$80.

From Goethe through Nietzsche and Schnitzler to Thomas Mann, Kafka, Hesse and others, the class studies and discusses the different literary styles and forms through the 19th century into the 20th century. Beginning with Goethe's classical view of man in *Faust*, the class traces each author's views of man's role in relation to universal moral values and to the changing society of their fellow man. **Fall:** Goethe's *Faust* and Fontana's *Effie Briest* are analyzed. Students read Nietzsche's *Thus Spoke Zarathustra* and excerpts from *Beyond Good and Evil* in order to understand better the moral and philosophical thoughts underlying the mood of the novels and plays that will follow in the winter and spring terms.

Fall Spec Term Sec 1 W—10 a.m.-12, Oct. 3-Dec. 12

(10 meetings—no class Nov. 21),

MacP, Kheim

No late fee through Sept. 26

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noncredit courses

- Sec 2 **Th**—7-9, Oct. 4-Dec. 13
(10 meetings—*no class Nov. 22*),
FolH 207, Kheim
No late fee through Sept. 27
- Winter Spec Term** Sec 3 **W**—10 a.m.-12, Jan. 9-Mar. 13
(10 meetings), MacP, Kheim
- Sec 4 **Th**—7-9, Jan. 10-Mar. 14
(10 meetings), FolH 207, Kheim
- Spring Spec Term** Sec 5 **W**—10 a.m.-12, Apr. 3-June 5
(10 meetings), MacP, Kheim
- Sec 6 **Th**—7-9, Apr. 4-June 6
(10 meetings), FolH 208, Kheim

(Johanna Kheim has taught French and humanities at the University of Minnesota)

★CEW 0307 WRITING FICTION FOR YOUNG PEOPLE. No credit, \$80 plus \$5 special fee. Total \$85.

There are certain facets of talent involved in writing fiction, but more are elements of craft that can (and must) be learned. Whether you have been writing for years and are looking for critical support, or are just thinking about starting and need information and the discipline of a group, this class is for you. The goal of the class is to increase skills, confidence, and critical capacity. Class time is divided between lectures on the craft of fiction, and students reading aloud and receiving response to their manuscripts. Instructor is available one-half hour before class for individual conferences. Information is provided on manuscript preparation and marketing. (Limited to 18)

Fall Spec Term Sec 1 **T**—1-3:30, Sept. 25-Nov. 13
(8 meetings), MacP, Bauer

Spring Spec Term Sec 2 **M**—1-3:30, Apr. 1-May 20
(8 meetings), MacP, Bauer

(Marion Dane Bauer, professional writing teacher, is an award-winning novelist)

★CEW 0308 LITTLE WOMEN GROW UP. No credit, \$48.

Survey of juvenile literature in the last 25 years, with a focus on the female as subject, author, and illustrator. Assessment of societal attitudes within the context of the times; stereotypes in words and pictures; and criteria for judging art and literature in young people's literature. Includes combating the Cinderella Syndrome in tales, myths, and legends; Wonder Woman and Her Cohorts—fantasy and science fiction; and Nancy Drew updated—modern realistic fiction. (Offered in cooperation with Southdale Library. Limited to 15)

Spring Spec Term Sec 1 **T**—1-3, Apr. 16-May 21
(6 meetings), Southdale Library,
7001 York Ave S, Edina, Stein
No late fee through Apr. 9

(Ruth Stein, Ph.D., education, has taught language arts and social studies for the University of Minnesota and Macalester College and is co-editor at Ginn Publishing Company)

CEW 0309 SISTERS. No credit, \$48.

Examines some literary "sister acts" to see how writers have used them to point out positive and negative female roles and options. See how sisters educate and provide
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noncredit courses

models for each other. What does this female-nurturing-female relationship mean for the author and for the reader? Readings from the following: Jane Austen, *Sense and Sensibility*; Louisa May Alcott, *Little Women*; Christina Rossetti, *The Gobelin Market*; Chekhov, *The Three Sisters*; Shirley Hazzard, *The Transit of Venus*; Eudora Welty, *Delta Wedding*; and Olive Schriener, *The Story of an African Farm*.

Spring Spec Term Sec 1 T—1-3, Apr. 16-May 21
(6 meetings), Highland Park Library,
1974 Ford Pkwy, StP, Wadman
No late fee through Apr. 9

(Karen Wadman has been an adjunct instructor in the Department of English)

CEW 0310 WOMEN'S LITERATURE/WOMEN'S HISTORY. No credit, \$51.

Novels written by women for women constitute a large, easily accessible body of historical documents concerning women's thoughts and lives. Until recently, fiction has rarely been used to analyze historical trends and social conditions, but the development of the field of social history, which focuses on the daily lives of men and women, has encouraged the use of nontraditional sources, particularly in the study of women's lives. In this course, students discuss various issues pertaining to the use of novels in historical inquiry. They explore various themes in the history of women in the United States, from the middle of the 19th century to the present, by reading novels written by and about women. Books include *Little Women*, *The Breadgivers*, *Their Eyes Were Watching God*, *the Dollmaker*, and *Meridian*.

Fall Spec Term Sec 1 T—10:30 a.m.-12:30, Sept. 25-Oct. 30
(6 meetings), Walker Library,
2880 Hennepin Ave S, Mpls,
Hyman

(Colette Hyman is a doctoral candidate in the Department of History, specializing in women's history)

★CEW 0311 WRITING FOR WOMEN'S MAGAZINES. No credit, \$60.

A practical course designed to help writers sell their nonfiction work to magazines—primarily women's magazines. In a workshop atmosphere, students learn how to analyze markets, write query letters, conduct interviews, research, organize, and write articles. (Offered in cooperation with Southdale Library. Limited to 15)

Fall Spec Term Sec 1 T—1-3, Oct. 2-Nov. 6
(6 meetings), Southdale Library,
7001 York Ave S, Edina,
Perry
No late fee through Sept. 25

(Susan Perry is a full-time free-lance writer who has written articles for more than 100 magazines and newspapers, including Ms., USAir, Lady's Circle, Twin Cities, and the Washington Post)

★CEW 0312 INTRODUCTION TO COPY-EDITING. No credit, \$75.

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 copy-editing problems. Recommended for writers and for people whose jobs require editing skills, and for others who enjoy language and words. Text: *The Chicago Manual of Style*. (Limited to 25)

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noncredit courses

Winter Spec Term Sec 1 **W**—7-9, Jan. 9-Feb. 27
(8 meetings), VinH 213, Perry

(Susan Perry is a former writer/editor for Time-Life Books who now works full-time as a free-lance writer and editor)

★CEW 0313 NONFICTION WRITING FOR PUBLICATION. No credit, \$60.

Students work on developing their writing skills and learn procedures necessary for selling their work in the magazine, newspaper, book, and corporate markets. Designed to meet specific needs of individual writers. Editors and professional writers from a variety of publications talk with students at several sessions. Participants receive critiques of their writing in a supportive and encouraging atmosphere. (Offered in cooperation with Southdale Library. Limited to 16)

Winter Spec Term Sec 1 **T**—1:30-3:30, Feb. 5-Mar. 12
(6 meetings), Southdale Library,
7001 York Ave S, Edina, Vick
No late fee through Jan. 29

(Judith Vick, M.A., journalism and mass communication, University of Minnesota, is a published writer and marketing consultant)

★CEW 0314 WRITING A BOOK PROPOSAL. No credit, \$50.

An intense course designed to help writers put together a finished book proposal to send to an agent or publisher. Emphasis is on nonfiction. Students learn how to research, write, and market a proposal. Students should come to the first class with an idea for a book. (Limited to 20)

Winter Spec Term Sec 1 **Th**—1-3, Mar. 28-Apr. 25
(5 meetings), MacP, Perry
No late fee through Mar. 21

(Susan Perry is a former writer/editor for Time-Life Books and currently works full-time as a free-lance writer and editor. She is the author of 11 nonfiction children's books and has ghosted or contributed to a variety of other books)

CEW 0315 PERCEIVING WOMEN: THE FUNCTION OF LANGUAGE IN DETERMINING OUR IDENTITY. No credit, \$48.

Students read Norman Mailer's *An American Dream*—a male fantasy of sexual and social violence—and then, in contrast, Lynn Andrews's feminist's fantasy of spiritual power, *Medicine Woman*. This leads into a discussion of how our perceptions of women in literature are determined by the use of language. Finally, students focus on what Adrienne Rich defines as "what we are—even when all the texts describe it differently" (*The Dream of a Common Language*). And we will examine what Susan Griffin calls our "hungering for an image of one's life that corresponds to what one feels" (*Every Woman Who Writes Is a Survivor*).

Winter Spec Term Sec 1 **F**—1-3, Feb. 8-Mar. 15
(6 meetings), MacP, Watkins
No late fee through Feb. 1

(Helen Watkins is an adjunct faculty member of the Women's Studies Program)

★CEW 0316 FICTION WRITING. No credit, \$70.

A class for beginning or experienced writers to explore some techniques for tapping the creative source in all of us, as well as to discuss the key elements in the writing and
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noncredit courses

telling of stories. A workshop format provides stimulation, motivation, and inspiration. Completed works and works-in-progress are read and commented on in the workshop. (Limited to 15)

Winter Spec Term Sec 1 T—1-3, Jan. 22-Mar. 12,
(8 meetings), MacP, King
No late fee through Jan. 15

(Shannon King has taught fiction writing at the Loft as well as at Central and Northern Michigan University. She is currently a full-time free-lance writer and has published fiction and poetry in small press magazines and the Minnesota Monthly)

★CEW 0317 WORDS: MAKING THEM WORK FOR YOU—PART II. No credit, \$33.

A continuation of Words: Making Them Work For You, but not limited to students who have taken that class. The focus is on the definition, pronunciation, and usage of useful words, with word origins, the "families of words," and word games also included. The class is designed for all people who want to increase their vocabulary and build word power, and who enjoy working and playing with words. It's appropriate for people who want to expand their vocabulary beyond professional jargon, and also for those planning to take undergraduate and graduate admissions exams or other tests requiring vocabulary skills. (Limited to 25)

Spring Spec Term Sec 1 W—12-1, Apr. 10-May 29
(8 meetings), MacP, DeNoble
No late fee through Apr. 3

(Jan DeNoble is a teaching specialist in the Reading and Writing Skills Center)

Mathematics/Computer Technology

Math Anxiety Program

The Math Anxiety Program is designed especially for people who are afraid of mathematics or who encounter blocks in mathematics. 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 and feelings about math at the same time they are working on their math skills. **Classes in the Math Anxiety Program include Math Anxiety Diagnostic Clinic, Math Anxiety Support Group, Arithmetic and Elementary Algebra, Math Anxiety Tutorial, and Taking the Sting Out of Stat: Statistics for Non-Statisticians.**

★CEW 0400 ARITHMETIC AND ELEMENTARY ALGEBRA. No credit, \$100 for sec 1, 3, 4.
\$120 for sec 2.

Arithmetic Part of the Course: Individualized instruction and group lecture in basic mathematics including fractions, decimals, ratio and proportion, percentages, the Metric System, and word problems from these areas. Students proceed at their own rate. Students may listen to lectures or work on an independent basis with the supervision of one of two instructors. No math background necessary. *Elementary Algebra Part of the Course:* Individualized instruction and group lecture in elementary algebra including signed numbers, solving equations, graphing, factoring, rational expressions, and roots and radicals. Students proceed at their own rate. Students listen to lectures or work on an independent basis with the supervision of

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one of two instructors. Students must have a strong background in arithmetic to do this part of the course. Elementary algebra students who want to review specific topics in arithmetic may sit in on the arithmetic lectures. (Limited to 50)

Fall Spec Term	Sec 1	W—5:30-8, Oct. 3-Dec. 12 (11 meetings), JonesH 2, Robertson <i>No late fee through Sept. 26</i>
	Sec 2	W—9:30 a.m.-12, Sept. 26-Jan. 16 (16 meetings—no class Dec. 26), MacP, McMorrow and Beste
Winter Spec Term	Sec 3	W—5:30-8, Jan. 9-Mar. 20 (11 meetings), JonesH 2, Robertson
Spring Spec Term	Sec 4	W—5:30-8, Apr. 3-June 12 (11 meetings), JonesH 2, Robertson

(Douglas Robertson is an assistant professor in the Division of Science, Business, and Mathematics of the General College. Vivian McMorrow has been an instructor in the CEW Math Anxiety program since 1975. Carol Beste has been with the CEW Math Anxiety Program since 1982 and has previously taught for the Weekend College at St. Catherine's)

★CEW 0401 COMPUTERS: A PRACTICAL INTRODUCTION. No credit, \$77 plus \$6 course fee. Total \$83 (includes computer time).

Designed for the novice who would like to develop an understanding of computers. Students learn how to communicate effectively with people in the computer science field and obtain a general knowledge of what the computer can do and how it will affect our lives. Explore how the computer is used as a problem-solving tool and why it seems to be a problem-creating tool. Topics covered include equipment, personnel, applications, history, future uses, the mathematics of computers, and programming. The programming language BASIC, used in most home computers, is presented. Participants have the opportunity to run simple programs in BASIC for approximately two hours. (Limited to 26)

Fall Spec Term Sec 1 MW—5:30-8:30, Sept. 17, 19, 24
(3 meetings), VinH 213, Ressler
No late fee through Sept. 10

Spring Spec Term Sec 2 TTh—5:30-8:30, Apr. 2, 4, 9
(3 meetings), LindH 302, Ressler

(Tom Ressler is an instructor in the School of Mathematics)

CEW 0402 MATH ANXIETY DIAGNOSTIC CLINIC. No credit, \$25.

The Diagnostic Clinic is the introductory step in the Math Anxiety Program. The clinic explores mathematics as a problem-solving tool and the nature of math anxiety—how it develops and how it affects math performance. Tests and questionnaires are used to help participants identify math skills and level of math anxiety. An overview of the math program and supportive services is given.

Fall Spec Term Sec 1 Th—9 a.m.-12, Sept. 13
(1 meeting), MacP,
Robertson, Claesgens
No late fee through Sept. 6
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Sec 2 **Th**—5:30-8:30, Sept. 13
(1 meeting), NCCE 140,
Robertson, Claesgens
No late fee through Sept. 6

Winter Spec Term Sec 3 **W**—5:30-8:30, Dec. 19
(1 meeting), NCCE 140,
Robertson, Claesgens
No late fee through Dec. 12

Sec 4 **Th**—5:30-8:30, Mar. 21
(1 meeting), NCCE 140,
Robertson, Claesgens
No late fee through Mar. 14

(Douglas Robertson is an assistant professor in the Division of Science, Business, and Mathematics of the General College. Joan Claesgens is program coordinator of the Math Anxiety Program in CEW)

CEW 0403 IS THERE A COMPUTER IN YOUR FUTURE? No credit, \$21.

Computers have entered the home, the workplace, the schools—yes, even the humanities. Is there a computer in your environment (or about to be)? How will you interface with it? This workshop introduces you to the computer and gives you basic information to help you understand what it is, how it works, and the future of computers in our society in a supportive setting. Topics include a definition of data processing, brief history of computers, characteristics and types of computers, components of a computer system, personnel, procedures, and documentation.

Winter Spec Term Sec 1 **Th**—9 a.m.-12:30, Feb. 7
(1 meeting), St. Paul College Club,
990 Summit Ave, Marker
No late fee through Jan. 31

(Carolyn Marker is the data systems head of the Audio Visual Library Service, Continuing Education and Extension)

★CEW 0404 MATH ANXIETY SUPPORT GROUP. No credit, \$34.

The support group works with participants in examining attitudes and behavior toward learning math, dealing with test anxiety, building a confident approach to math, and applying assertive techniques in gaining control over math anxiety. Led by a counseling psychologist and designed to complement the math classes. Students are encouraged to participate in the Diagnostic Clinic and enroll in a math class. (Limited to 20)

Fall Spec Term Sec 1 **T**—6-7:30, Oct. 9-Nov. 6
(5 meetings), NichH 209A, Peterson
No late fee through Oct. 2

(Sue Peterson is a counselor in the Continuing Education and Extension Counseling Department and is a licensed psychologist)

★CEW 0405 PUTTING YOUR HOME COMPUTER TO WORK FOR YOU. No credit, \$32.

Lecture and hands-on experience with computer applications for the home user including word processing, electronic spreadsheets, computer graphics, and data communications. (Prereq basic understanding of how a computer functions. Previous courses in this series are adequate preparation. Limited to 40)

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noncredit courses

Spring Spec Term Sec 1 Sa—8:30 a.m.-12:30, Apr. 20
(1 meeting)
EBCEC 52, StP Campus, Marker
No late fee through Apr. 12

(Carolyn Marker is data systems head of the Audio Visual Library Service, Continuing Education and Extension)

CEW 0406 TAKING THE STING OUT OF STATISTICS: STATISTICS FOR NONSTATISTI- CIANS. No credit, \$76.

A preparatory course for QA 1050 or undergraduate or graduate-level statistics in psychology or sociology, designed especially for people who are afraid of taking statistics or who want a basic understanding of statistical concepts. The class familiarizes students with statistical vocabulary and notation, descriptive statistics, probability distributions, and hypothesis testing. Students who lack sufficient background in arithmetic or algebra should consider taking Arithmetic and Elementary Algebra prior to taking this course.

Fall Spec Term Sec 1 T—6-8, Sept. 25-Nov. 27
(10 meetings), NCCE 229, Broch

(Elana Broch is a graduate student in psychometrics)

MATH ANXIETY TUTORIAL. No charge.

Free tutorial services for students enrolled in CEW math classes are available every other week one hour prior to the evening Arithmetic and Elementary Algebra classes. Complete schedule information available at first class session of Arithmetic and Elementary Algebra.

Social Science

CEW 0500 NUCLEAR MILITARISM AND ITS CRITICS. No credit, \$62.

After three decades of international politics at an impasse, there are signs today of ferment and a search for alternatives to the nuclear militarism of the Soviet Union and the United States and the pressures that a rigid East/West rivalry has brought to the nations on both sides of the dispute. This course examines the search for new political alternatives to the international politics of nuclear militarism and follows the struggle for new politics in six issues: (1) Russian and American military rivalry in the nuclear age: What about the Russians? What about ourselves? (2) The end of the American era in Western Europe: Is NATO obsolete? (3) Eastern Europe: Solidarity and the challenge to a senescent Soviet Empire, (4) END: Disarmament and the movement for a nuclear-free Europe, (5) Red Brigades and Greens: Radical dissent and terrorism in Western Europe, and (6) Ghandi and Tolstoy rediscovered: Nonviolence and civil disobedience in our time.

Spring Spec Term Sec 1 W—6:30-8:30, May 1-June 5
(6 meetings), Walker Library,
2880 Hennepin Ave S, Mpls,
Hayes
No late fee through Apr. 24

(Nicholas Hayes, Ph.D., Executive Director of Associated Colleges of the Twin Cities, is a specialist in Soviet affairs as well as a journalist and public lecturer on Soviet European history)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

CEW 0501 ECONOMIC POLICY IN A PRESIDENTIAL CAMPAIGN SEASON. No credit, \$63.

We hear so many claims and charges about the performance of the economy, and so many promises to "fix" it. The media report the speeches but provide little framework or background analysis to help us penetrate the jargon and political overstatements. This course fills that gap. It provides the economic and political analysis on current issues of national economic policy such as unemployment and inflation; supply side "Reaganomics;" the federal budget, and coping with \$200 billion deficits; the world economy: gold, the dollar, and foreign debt crises; does America need an industrial policy?; the deregulation of banking and finance, and the direction of monetary policy.

Fall Spec Term Sec 1 **Th**—10 a.m.-12, Oct. 4-Nov. 15
(7 meetings), MacP, Green
No late fee through Sept. 27

(George Green is an associate professor in the Department of History)

CEW 0502 MIDDLE EAST KALEIDOSCOPE: THE QUEST FOR A LASTING PEACE. No credit, \$50.

The shifting sands of Arab and Israeli myths, prejudices, and emotions obscure the American national interest in a lasting peace in the Middle East. This 5-part course includes historical, moral, and material bases for conflicting rights. United States successes and failures, and the political, economic, and ethical bases of American foreign policy in the area. Students are invited to construct alternative courses of action for the United States.

Fall Spec Term Sec 1 **T**—10 a.m.-12, Oct. 16-Nov. 13
(5 meetings), MacP, Quinlan
No late fee through Oct. 9

(C. Patrick Quinlan is a retired American diplomat with ten years of service in the Middle East and extensive working experience in civil rights in the U.S.)

CEW 0503 PHILOSOPHY, SCIENCE, AND RELIGION: CONFLICT AND RECONCILIATION. No credit, \$52.

Explores the conflict between modern science and religion through practical, philosophical inquiry. Trace the historical and philosophic development of this conflict, the current status of conflict, and the tension between scientific and religious attitudes and emotions. Through analysis of logical and psychological consequences of religious and scientific world views, and discussion of possible reconciliation, students develop an objective understanding of various dimensions of the conflict. (No previous knowledge of the sciences is necessary)

Winter Spec Term Sec 1 **T**—9 a.m.-11, Jan. 15-Feb. 19
(6 meetings), MacP, Zanoni
No late fee through Jan. 8

(Candido Zanoni is a professor in philosophy and head of the Division of Arts, Communication, and Philosophy of the General College)

★CEW 0504 RECOGNIZING INTERNATIONAL CONCERNS OF WOMEN. No credit, \$40.

Addresses the question of why it is important for women in the United States to understand the conditions and needs of women internationally. Examine how women in other countries have developed organizational strategies to try to improve

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

their life situations. Mechanisms for women in the U.S. to interact with other women internationally also are identified.

Spring Spec Term Sec 1 T—1-3, Apr. 9-30
(4 meetings), MacP, Patten
No late fee through Apr. 2

(Sonia Patten, Ph.D., anthropology, is a post-doctoral fellow in the Department of Family Practice and Community Health)

CEW 0505 MINNESOTA'S RURAL LANDSCAPE. No credit, \$52.

Why do rural roads run in straight lines one mile apart? How many acres of land does the Federal Government own? When did rural communities obtain electricity and telephone services? What is a soil and water conservation district? Come and discover the answers to these and other questions. Come and learn about Minnesota's landscape.

Winter Spec Term Sec 1 T—10 a.m.-12, Jan. 22-Feb. 26
(6 meetings), MacP, Squires
No late fee through Jan. 15

(Rod Squires is an associate professor in the Department of Geography)



Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

Informal Courses (IC)

Informal Courses are refreshingly informal, noncompetitive, and flexible; there are no grades, examinations, transcripts, or credits. Students can learn in a personalized atmosphere, in many cases sharing experiences and knowledge with other students and instructors. And there are no entrance requirements—a high school diploma isn't necessary, and a college degree or two won't hold you back.

They are scheduled for two to eight class meetings and are interesting, provocative, and practical. And all the student must bring is an eagerness to learn and a willingness to participate.

Tuition

See the course descriptions below for tuition charges for each course.

University employees who wish to take noncredit Informal Courses must pay one-half the regular tuition plus all course fees and special fees given with a course. You must submit a letter from your department head verifying employment when you register. For limited enrollment courses, you may register starting the second week of mail registration. For nonlimited classes, you may register during regular registration periods.

Senior citizens 62 and over may register for any Informal Course at one-half the cost of the regular tuition rate plus all course fees and special fees (if any). In limited-enrollment Informal Courses, registrations will be accepted beginning the second week of mail registration. Young persons 12-16 may register for \$3 in nonlimited Informal Courses (plus full course fees and special fees, if any) only if they are genuinely interested, unusually mature and are accompanied by an adult registered in the same class (youth reduced-tuition fees for *limited-enrollment* classes are available only on a space-available basis after full-tuition students have registered and paid fees). Senior citizens and youth may enroll in *nonlimited-enrollment* classes during regular registration dates.

Registration

Unless otherwise noted, registration procedures, dates and locations are the same as for credit registration fall, winter and spring **quarters**. See the "**When and How to Register**" section.

Late registrations must be accompanied by a late fee of \$5. See "**When and How to Register.**"

Books

In some cases, students will be expected to make a modest amount of outside preparation for class. When the purchase of books is advised, those books will be available at the Minnesota Book Center (Williamson Hall) on the East Bank campus of the University for courses held on the Minneapolis campus or in neighborhood centers; and at Books Underground on the St. Paul campus for courses held on the St. Paul campus (see the **Bookstores** section of this Bulletin).

Other options

If you don't see here exactly what you want, be sure to browse through the rest of this Bulletin to find hundreds of courses of interest which you may audit for no credit and have recorded on a University transcript. Courses preceded by a ♦ in the margin may be taken for no credit-no record at approximately one-half tuition or for the \$3 youth plan described above. See page 48 for information on reduced-tuition plans.

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Arts and Humanities (begins page 473)

- 0106 Photo Workshop I
- 0108 Introduction to Color Photography
- 0111 Understanding Movies: Strategies for Criticism and Appreciation
- 0112 From Dudelsack Through Bach and Back
- 0113 Music: How to Listen to It
- 0114 Sad Movies Make Me Cry: A Guide to Films That Touch Our Lives
- 0115 The Making of America's Musical
- 0116 New Twin Cities Theatre
- 0117 Opera: An Introduction
- 0154 The Future of the City
- 0156 Your Home: Its Design, Selection and/or Construction
- 0162 Introduction to Weaving
- 0164 Basic Creative Drawing
- 0165 Painting in Watercolor
- 0167 Printmaking
- 0168 Studio Art Painting in Oils and Acrylics
- 0169 Weaving on Frame Loom or Canvas Stretcher
- 0181 The Post Card as Collectable: History and Visual Image
- 0186 Introduction to Bookbinding
- 0196 Minnesota Railroad History: An Inside Look

Nature and the Outdoors (begins page 478)

- 0200 Field Ecology in Minnesota
- 0207 Minnesota Plants and Their Uses
- 0210 Animal Behavior
- 0216 Minnesota Wild Flowers
- 0217 Marsh, Swamp, Bog, and Fen—Minnesota's Wetlands
- 0218 Studying Mammals in the Field
- 0219 Animal Ecology and Behavior: A Lecture Series
- 0222 Identifying Birds: An Introduction to Ornithology
- 0224 Winter Ecology in Minnesota
- 0226 Ecology and Management of Minnesota Fish
- 0227 Mushroom Identification
- 0229 Identifying Birds: An Intermediate Course
- 0235 Minnesota Birds: Abundance and Distribution
- 0240 How Birds Work: An Introduction to Bird Biology
- 0245 Landscaping the Minnesota Home Grounds
- 0248 Hives and Honeybees: An Introduction to Beekeeping
- 0254 Super-Insulated and Other Energy Efficient New Construction
- 0263 Minnesota Geology: An Introduction to Your Surroundings
- 0265 Introduction to Coral Reefs
- 0274 Nature Photography: Art, and Technique
- 0275 Advanced Field and Nature Photography
- 0277 Natural History Drawing
- 0290 Horses
- 0294 Sailing: Basic Techniques
- 0295 Sailing: The Art and Practice
- 0296 Sailing: Marine Navigation—Coastal and Inland Piloting
- 0300 Photographing Wild Flowers
- 0302 The Behavior of Common Birds

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

Growth and Development (begins page 488)

- 0414 Advanced Arts Management: Decision Making and Conflict in the Arts Organization
- 0416 Effective Time Management
- 0417 Dealing with Job Stress
- 0427 Creating an Effective Slide Show
- 0435 Poetry Writing
- 0436 Magazine Writing
- 0439 Creative Writing
- 0440 How to Market Your Photographs
- 0441 Newsletter Writing
- 0442 Publicity for Community Organizations
- 0445 Layout and Pasteup for Beginners
- 0450 Career Decisions: Strategies for Change
- 0531 Yoga and Meditation
- 0539 Effective Lobbying
- 0541 Soil Pollution and Public Policy
- 0574 Small Landlords: Rights, Remedies, and Obligations to Tenants
- 0576 Farm Management for the Absentee Landowner
- 0577 Getting Started in Part-Time Farming
- 0581 Spanish for Travelers
- 0582 French for Travelers
- 0583 German for Travelers
- 0584 Italian for Travelers
- 0590 Rapid Reading and Comprehension
- 0592 Which Home Computer to Buy?
- 0593 How to Get the Most Out of Your Home Computer
- 0594 Computing: What Is It?
- 0596 Introduction to Word Processing
- 0600 Orientation for Travelers to Europe
- 0602 The Ancient and Modern Maya: An Orientation to Mexico's Yucatan Peninsula
- 0603 The Soviet Union Today
- 0604 Buried Cities of the Ancient Romans: Pompeii, Herculaneum

Study & Travel Adventures (begins page 498)

- 0919 A Winter Birding and Natural History Tour of South Texas
- 0920 The Birds and Natural History of Coastal Maine
- 0923 The Wildlife and Wildlands of Alaska
- 0925 Gardens of the Delaware Valley
- 0926 The Natural History and Culture of Peru
- 0927 Egypt of the Pharaohs
- 0928 Spectacle of Wild Geese
- 0929 Rome of the Caesars
- 0930 Music Festivals of Austria
- 0931 A Historical Sampler of Britain
- 0932 Photography and Natural History in Florida
- 0934 Winter Photography on the North Shore
- 0935 Winter Wildlife: A Weekend in the North Woods
- 0936 Rocky Mountain Wildflower Photography Workshop

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

Arts and Humanities

★IC 0106 PHOTO WORKSHOP I. No credit, \$52.

An exploration of the camera, optics, film, and related photographic processes. Requires little or no experience in photography. Includes an introduction to darkroom developing and printing. Photographic paper and film are furnished. Bring camera to first class period. Consultation about camera selection will be available. (Limited to 25)

Fall Spec Term Sec 1 M—6-8:30, Oct. 8-Nov. 5
(5 meetings),
MacP 5, Millikan

No late fee through Oct. 1

Spring Spec Term Sec 2 Sa—1-3:30, Apr. 6-May 4
(5 meetings),
MacP 5, Millikan

No late fee through Mar. 29

(Jeff Millikan is a lecturer in the General College)

IC 0108 INTRODUCTION TO COLOR PHOTOGRAPHY. No credit, \$92.

A foundation course in the growing field of color photography, designed to provide the student with practical knowledge and experience in basic color work. Course includes (a) lecture-demonstrations of equipment, color processes, and techniques; and (b) supervised camera assignments in the studio and on outdoor field trips. Student must have camera.

Fall Spec Term Sec 1 T—6:30-9, Oct. 2-Nov. 20
(8 meetings), AgEng 102, StP
Campus, Webb

No late fee through Sept. 25

Spring Spec Term Sec 2 T—6:30-9, Apr. 9-May 28
(8 meetings), AgEng 102, StP
Campus, Webb

No late fee through Apr. 2

(Harry Webb is the director of the Audio Visual Center at the College of St. Thomas)

IC 0111 UNDERSTANDING MOVIES: STRATEGIES FOR CRITICISM AND APPRECIATION. No credit, \$52.

This course is an attempt to understand movies through an awareness of cinematic forms—those aspects of movies which make the film medium special and different from other art forms. Our ability to appreciate and understand movies depends on our knowledge of how movies are constructed, our ability to recognize what the filmmaker is up to. To this end we will view and discuss several exceptional films with an eye towards how they employ the special capacities of the visual media. This will include comparisons of films which rely on dialogue to those which are primarily visual, as well as comparisons of films which emphasize editing to those which rely most heavily on casting and sets. Classes will include short lectures, film screenings and discussions.

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Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

Fall Spec Term Sec 1 T—6:30-9, Oct. 2-Nov. 6
(6 sessions),
MurH 308, Griffin
No late fee through Sept. 25

(Michael Griffin, visiting assistant professor, School of Journalism and Mass Communication, has studied and taught with Amos Vogel, foremost critic of independent film. He has also written articles on film and other visual media and has worked as a documentary filmmaker)

IC 0112 FROM DUDELSACK THROUGH BACH AND BACK. No credit, \$45.

new

Students learn to enjoy music as it is found in Austria and Germany. Folksong from Alpine heights to Rhineland valleys, tavern songs to Lieder, and ländler to waltz, with special attention given the symphonic works of Bruckner and Brahms, Schubert and Schumann, Strauss, Mozart, Mendelssohn, and Mahler.

Fall Spec Term Sec 1 M—7-9, Sept. 24-Oct. 22
(5 meetings), WullH 230, Byrne

(Richard Byrne, associate professor in the General College, is the director of music at the Cathedral of St. Paul)

IC 0113 MUSIC: HOW TO LISTEN TO IT. No credit, \$52.

An introduction to basic musical elements and trends through listening to the music of great composers, such as Bach, Mozart, and Stravinsky. Various musical concepts, including notational symbols, structure, form, and style will be discussed. The development of music from a simple to a complex art form will be demonstrated by classroom performance and recordings.

Winter Spec Term Sec 1 M—7-9, Jan. 14-Feb. 25
(7 meetings),
NichH 111, Byrne
No late fee through Jan. 7

(Richard Byrne, associate professor in the General College, is the director of music at the Cathedral of St. Paul)

IC 0114 SAD MOVIES MAKE ME CRY: A GUIDE TO FILMS THAT TOUCH OUR LIVES. No credit, \$55.

When was the last time you cried, or cheered, or clapped, or were otherwise caught up emotionally while watching a film? What power do some films have to touch our lives in a deeply personal way? We'll seek some answers to these questions by studying representative films that offer audiences characters we can identify with, conflicts that engage us on a personal and emotional level, and stories that challenge old assumptions and inspire us to consider new ways of relating to others. Excerpts from relevant films will be viewed in each class, and students can expect spirited discussion after each film screening. One class session will be devoted to discussion of a film currently showing in the Twin Cities.

Spring Spec Term Sec 1 T—6:30-9, Apr. 9-May 14 (6 meetings), NichH 209,
Yahnke
No late fee through Apr. 2

(Robert Yahnke is an associate professor in the Arts, Communication and Philosophy division of the General College)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

IC 0115 THE MAKING OF AMERICA'S MUSICAL. No credit, \$49.

Explore the various forces which shaped the American musical comedy. Topics include the early forms of popular theatre—minstrel shows, vaudeville, and burlesque; an examination of the American operetta; a romp through the glorious excesses of the *Follies*; an analysis of the "formula" musical at its best; and a tribute to the leading ladies whose particular talents and personalities influenced the genre—Faye Templeton, Marilyn Miller, Ethel Merman, Gertrude Lawrence, and Mary Martin, among others. Lectures include recorded and some live musical illustrations performed by Dr. Sutton and students of the University of Minnesota's opera program.

Spring Spec Term Sec 1 **W**—7-9, Apr. 10-May 8
(5 meetings), ScottH 103, Sutton
No late fee through Apr. 3

(Vern Sutton, Professor, School of Music, is director of the Opera Workshop)

IC 0116 NEW TWIN CITIES THEATRE. No credit, \$52.

Provides a provocative, stimulating, and thoughtful look at what has been acclaimed to be some of the nation's very best and most original theatre. Attend three performances from among these area companies: At the Foot of the Mountain, Heart of the Beast, Cherry Creek, Actor's Theatre, Theatre Three, Illusion Theatre, Palace Theatre (exact performances will depend on fall schedule of these groups). Meet and talk with artists and discuss these productions. Students get a close-up look at several of the area's most original and exciting theatre companies. **Tuition does not include cost of theatre tickets.**

Fall Spec Term Sec 1 **Th**—7-8:30, Oct. 4-18
(3 meetings plus two performances on
Thursday or Friday evenings),
WullH 130, O'Fallon
No late fee through Sept. 27

(David O'Fallon is director of Continuing Education in the Arts)

IC 0117 OPERA: AN INTRODUCTION. No credit, \$50.

What is it? Where did it come from? Increase your knowledge and broaden your horizons as you trace the origins and development of opera, the marvel of Western culture. Lecture, slides, and many musical examples. Includes discussion and samplers of opera most likely heard today.

Fall Spec Term Sec 1 **Sa**—8:30 a.m.-12, Oct. 13-20
(2 meetings), StCen 110, StP Campus,
F Adelman, B Adelman
No late fee through Oct. 5

(Fred Adelman, professor emeritus and president of Opera St. Paul, and Bobbie Adelman, have traveled on opera-centered visits to Europe and Australia and throughout the U.S. Lifelong devotees to the art form, they are active in Twin Cities opera education programs)

IC 0154 THE FUTURE OF THE CITY. No credit, \$43.

Most urban areas are the product of a "bygone" era and are generally underserved and in disrepair. They have an additional characteristic in common: they were designed by people for the use of people. This course deals with the question of how we as people can learn to anticipate the future of the urban environment and its

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noncredit courses

various scales—personal, neighborhood, city, metropolitan, and regional. The information and techniques covered allow the student to identify and understand the issues and forces governing the "Urban Dynamic" and suggest how they can be utilized to enhance their investment in the future.

Fall Spec Term Sec 1 **W**—7-9, Oct. 3-Oct. 31
(5 meetings), Arch 20, Seiberlich
No late fee through Sept. 26

(Larry Seiberlich is a registered architect, a futurist, with a master's degree in education. He is the head of the architectural program at North Hennepin Community College)

IC 0156 YOUR HOME: ITS DESIGN, SELECTION AND/OR CONSTRUCTION. No credit, \$47.

new

Introduces participants to the many issues and concerns involved in the design or selection of a home. Topics include the process of defining needs, designing to satisfy those needs (individual "hands-on" participation), lifestyle and energy considerations, and the many options available to the home buyer. Throughout the course students will collect ideas and information for their own home-planning packages.

Spring Spec Term Sec 1 **W**—7-9, Apr. 10-May 15
(6 meetings), Arch 55, Susanka
No late fee through Apr. 3

(Sarah Susanka is a registered architect, lecturer in Architecture, and a partner in the firm Mulfinger-Susanka)

★IC 0162 INTRODUCTION TO WEAVING. No credit, \$59.

In this introduction to the gentle art of weaving, we explore basic weaving techniques and patterns while becoming familiar with table and floor looms and with different fibers. Expect to weave several samples. Attendance at the first meeting is mandatory. (Limited to 20)

Fall Spec Term Sec 1 **Sa**—9 a.m.-11:30, Oct 6-Nov. 10 (6 meetings),
WullH 340, Smits
No late fee through Sept. 28

(Anna Smits is an instructor in Art Education)

IC 0164 BASIC CREATIVE DRAWING. No credit, \$47.

new

Using natural forms and surroundings as subject, learn techniques of observation that help you gain access to the part of your mind that works in a style conducive to creative, intuitive thought. Drawing skills taught are based on exercises developed through recent discoveries in brain hemisphere processes. A fresh approach in learning to draw that also will be helpful to those who already draw, to draw better and to see better. Course emphasizes line drawing with pencil, pen and ink, and charcoal, that includes basic techniques for drawing and illustration for printing reproduction.

Spring Spec Term Sec 1 **T**—7-9, Apr. 9-May 14
(6 meetings), Arch 55, Anderson
No late fee through Apr. 2

(Janice Anderson, a commercial artist, is a teaching specialist in the Department of Design)

Read about abbreviations, symbols, and maps on page 60.
Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

★IC 0165 PAINTING IN WATERCOLOR. No credit, \$59 (cost of materials extra)

An introductory course in watercolor painting. Discussion of materials, paints, papers, brushes, and their use; slide-illustrated lectures and demonstrations of watercolor techniques—washes, textural effects, use of color combinations, creating moods in painting. Painting sessions with individual attention given to encourage and develop creativity. Individual assistance and group critique. (Limited to 25)

Spring Spec Term Sec 1 Th—7-9, Apr. 11-May 16 (6 meetings),

WullH 120, Netz

No late fee through Apr. 4

(Marija Skutans Netz is an instructor in Art Education and a free lance water-colorist)

IC 0167 PRINTMAKING. No credit, \$33.

The idea of creating a single image again and again is a very exciting process. This workshop is an introduction to printmaking. Emphasis is directed to a creative and individual approach to the basic techniques of designing, processing, and printing. Focus will be on adaptability to personal interests—such as designing greeting cards, invitations, stationery, book-plates, and holiday items. Materials involve linoleum, wood, cardboard for calligraphs or collage prints. Equipment and some supplies will be furnished.

Fall Spec Term Sec 1 W—6:30-8:30, Oct. 3-24

(4 meetings),

WullH 220, Olson

No late fee through Sept. 26

(George Olson is Professor Emeritus in Art Education)

★IC 0168 STUDIO ART PAINTING IN OILS AND ACRYLICS. No credit, \$78.

For those interested in the enjoyment and technique of painting. Sessions are designed to encourage personal ideas and to improve skills to make them artistically satisfying. Painting can be in acrylics or oils. Demonstrations, critiques, and discussion will be included in class meetings. Instruction will be varied to benefit the more advanced student as well as the beginner. Students should bring sketch pad and pencil for the first meeting when a more detailed list of supplies will be given. (Limited to 25)

Fall Spec Term Sec 1 T—6:30-9, Oct. 2-Nov. 20

(8 meetings),

ArtB 151, Safer

No late fee through Sept. 25

(Louis Safer is emeritus professor of art in the General College. He has exhibited nationally and in Europe and his work is included in the collection at the Smithsonian portrait gallery and the national gallery in Finland)

★IC 0169 WEAVING ON FRAME LOOM OR CANVAS STRETCHER. No credit, \$59.

An excellent way to acquaint yourself with the skill of weaving. Learn basic warping procedures and weaving techniques: tabby, twill, rya, tafting, soumock, lace weaves. Weave a pillow top or wallhanging, scarf or table runner. Students need a frame loom or canvas stretcher. (Limited to 16)

Spring Spec Term Sec 1 T—6:30-9, Apr. 2-May 7

(6 meetings), WullH 110, Smits

(Anna Smits is an instructor in Art Education)

IC 0181 THE POST CARD AS COLLECTABLE: HISTORY AND VISUAL IMAGE. No credit, \$40.

Collecting post cards, a popular pastime in the early 20th century, is once again
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noncredit courses

returning to popularity. Many antique and modern post cards are highly regarded by collectors. This course consists of lectures and discussions by five of the area's leading post card authorities on all aspects of post cards, post card collecting, and making post cards. Opportunity is also provided for evaluation and discussion of cards brought to class by students.

Spring Spec Term Sec 1 **Th**—6:30-8:30, Apr. 4-25
(4 meetings), Arch 45, Husom

(David Husom, Assistant Professor of Photography, MacPhail Center for the Arts, is an avid post card collector and an author of numerous articles on post cards and post card collecting)

IC 0183 ANTIQUES: PRINCIPLES OF COLLECTING. No credit. **Tentatively scheduled for 1985-86.**

IC 0186 INTRODUCTION TO BOOKBINDING. No credit, \$46.

Bookbinding is an artistic craft of great antiquity, yet the techniques for handbinding remain the same. This workshop offers an introduction for beginners to learn basic techniques of hard-cover and Japanese binding of books. Each student will have the opportunity to make two books as well as create decorative end-papers and covers. Equipment and some supplies will be furnished.

Spring Spec Term Sec 1 **M**—6:30-8:30, Apr. 8-29 (4 meetings),
WullH 220, Olson
No late fee through Apr. 1

(George Olson is professor emeritus in art education)

★**IC 0196 MINNESOTA RAILROAD HISTORY: AN INSIDE LOOK.** No credit, \$39.

An inside look at more than a century of Minnesota railroad history from the collections of the Minnesota Historical Society. Classes meet at the Society's St. Paul Research Center at 1500 Mississippi St., home of one of America's largest railroad research collections—the archives of the Northern Pacific and Great Northern railways, which include some three linear miles of historic records. The course offers an overview of the state's rail development since 1861 when the locomotive "William Crooks" arrived by steamboat and a chance to view photographs, advertising literature, maps, pamphlets, engineering and architectural drawings, and other records. A **Saturday morning field trip on Oct. 20** includes visits to historic Twin Cities railroad sites. (Limited to 36)

Fall Spec Term Sec 1 **T**—7-9, Oct. 9-16
(2 meeting plus field trip).
See meeting site above. Wickre
No late fee through Oct. 2

(John M. Wickre is an archivist and railroad history specialist for the Minnesota Historical Society)

Nature and the Outdoors

Members of the Bell Museum of Natural History may register for Bell Museum courses at reduced tuition.

★**IC 0200 FIELD ECOLOGY IN MINNESOTA.** No credit (3.3 CEUs available), \$85. \$76 for Bell Museum members (indicate membership number on registration form).

Minnesota has an astonishingly large array of habitats, from peatlands to drought-stressed prairies, oak savannahs, rich maple-basswood forests, pine woods, cattail
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noncredit courses

marshes, cedar swamps, and thousands of lakes. This course gives you the tools to understand more about the interactions among plants, animals, soils, geology, and climate to add to your enjoyment of the outdoors. Classroom sessions involve lectures, slides, and discussion to introduce you to some of the fundamental concepts in ecology such as energy flow, nutrient cycling, species diversity, succession, and adaptation. There is a half-day field trip (Sept. 29) to Wolsfeld Woods, a full-day field trip (Oct. 13) to Cedar Creek Natural History Area, and an overnight field trip (Oct. 27-28) to Itasca State Park. Students visit various types of Minnesota environments, and stretch understanding of them by applying the concepts discussed in class. (Limited to 25)

Fall Spec Term Sec 1 W—7-9, Sept. 26-Oct. 31
(6 meetings plus field trips),
BellMus 175 (use SW entrance), Allison
No late fee through Sept. 19

(Taber Allison is an experienced field ecologist and outdoor educator, and a graduate student in Ecology and Behavioral Biology)

- ★IC 0207 **MINNESOTA PLANTS AND THEIR USES.** No credit, (1.8 CEUs available), \$59. \$53 for Bell Museum members (indicate membership number on registration form).

Learn some of the common plants, both native and introduced, that have provided people with a source of food, beverages, medicine, fibers for clothing and rope, dyes for skin and fabric, poisons, and folklore. Included in the course are discussions of basic plant identification and of the various plant groups—including mushrooms, lichens, ferns, conifers, and flowering plants. Material is presented as demonstrations and slide-illustrated lectures. Two Saturday field trips in the Twin Cities area (Sept. 29 and Oct. 13). (Limited to 25)

Fall Spec Term Sec 1 W—7-9, Sept. 19-Oct. 17
(5 meetings plus field trips),
BioSci 12, StP Campus, Bergad

(Robert Bergad teaches Plants Useful to Man and Minnesota Plant Life in the University Extension division, and biology at Hamline University. Currently he is writing a book about the uses of Minnesota plants)

- ★IC 0210 **ANIMAL BEHAVIOR.** No credit, (2.4 CEUs available), \$59. \$53 for Bell Museum members (indicate membership number on registration form).

The behavior of animals, especially those living in groups, is much more complex than most people realize. This introductory course will present some current concepts of animal behavior, using lions, macaques, gibbons, mallards, insects, and many other animals as examples. Students will look not only at how these animals behave, but also at some of the underlying reasons why they behave that way. Subjects include learning and conditioning, courtship and reproductive behavior, territoriality and dominance hierarchies, play, social vs. solitary living, and methods of studying animal behavior. Lectures will be supplemented by films and slides. There will be four Saturday morning field trips that will illustrate many of the topics discussed in class (Apr. 13, 20, 27, May 4) to the Minnesota Zoo and to Wood Lake Nature Center. (Limited to 25)

Spring Spec Term Sec 1 M—7-9, Apr 8-29
(4 meetings plus field trips),
BellMus 175 (use SW entrance), Evarts
No late fee through Apr. 1

(Sue Evarts is a graduate student in Ecology and Behavioral Biology. Her research involves the reproductive biology of mallards)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

BELL
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noncredit courses

IC 0216 MINNESOTA WILDFLOWERS. No credit, (2.5 CEUs available), \$65. \$58 for Bell Museum members (*indicate membership number on registration form*).

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Get to know Minnesota's spring wildflowers. Native wildflowers of woodland and prairie are seen during three Saturday morning field trips (**May 4**, Minnesota Landscape Arboretum; **May 11**, Wolsfeld Woods; **May 18**, Schaeffer Prairie). During evening sessions students view flowers under the microscope, learn to identify unknown wildflowers, and become familiar with major plant families in Minnesota. Slides and films illustrate the diversity of wildflowers found in Minnesota woodlands, prairies, and bogs, with emphasis on plant ecology and identification. Other topics include how flowers attract pollinators and where to go to see wildflowers.

Spring Spec Term Sec 1 **W**—6:30-9, Apr. 24-May 22
(5 meetings plus field trips),
Zoology 101b, Webb
No late fee through Apr. 17

(Sara Webb is a graduate student in Ecology and Behavioral Biology whose research concerns seed dispersal and the history of vegetation)

★IC 0217 MARSH, SWAMP, BOG, AND FEN—MINNESOTA'S WETLANDS. No credit, (3.4 CEUs available), \$70. \$63 for Bell Museum members (*indicate membership number on registration form*).

BELL
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COURSE



new

Minnesota's wetlands are rarely visited except by scientists and naturalists. Students will explore them in bugless, cool weather. Field trips to a bog with insectivorous plants, a dark and quiet black spruce swamp, an alkaline fen with showy flowers, a cattail marsh, and a peat mining area. Lectures cover wetland classification, typical flora and fauna, hydrology and wetland values. Two Saturday morning field trips (**Sept. 22**, Wood Lake Nature Center; **Sept. 29**, Minnesota River valley), and one weekend trip (**Oct. 6, 7**) to Cloquet. Students should be prepared for cold water. (Offered in cooperation with the U.S. Fish and Wildlife Service. Limited to 25)

Fall Spec Term Sec 1 **T**—7-9, Sept. 11-Oct. 9
(5 lectures plus field trips),
BellMus 311 (use SW entrance), Sigford
No late fee through Sept. 4

(Ann Sigford is manager at Wood Lake Nature Center)

IC 0218 STUDYING MAMMALS IN THE FIELD. No credit, (3.0 CEUs available), \$66. \$59 for Bell Museum members (*indicate membership number on registration form*).

BELL
MUSEUM
COURSE



Most mammals are secretive and rarely seen, yet are an important and fascinating component of many biological communities. This field-oriented course explores ways that mammals are studied in the wild, with emphasis on some of our local mammalian fauna. Students learn about mammalian ecology and behavior through direct observation, identification of sign, and application of monitoring techniques. Methods demonstrated in the field include radio tracking, census techniques, scent stations, and trapping. Previous knowledge of Minnesota's mammals is useful (IC 0215 or equivalent) but not essential. **Three field trips:** two half-day Saturday trips (**Sept. 22 and 29**), tentatively scheduled to Sherburne National Wildlife Refuge and Cedar Creek Natural History Area; and one weekend trip (**Oct. 5-7**) to Itasca State Park, where autumn colors, as well as mammal populations, should be at a peak.

Fall Spec Term Sec 1 **Th**—7-9, Sept. 20-Oct. 4
(3 lectures plus field trips),
BellMus 311 (use SW entrance), Nordquist
No late fee through Sept. 13

(Gerda Nordquist is a graduate student in Ecology and Behavioral Biology who has done field work on mammals in Minnesota and elsewhere)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

IC 0219 ANIMAL ECOLOGY AND BEHAVIOR: A LECTURE SERIES. No credit, (1.6 CEUs available), \$44. \$40 for Bell Museum members (*indicate membership number on registration form*).

BELL
MUSEUM
COURSE



new

Wolves, eagles, lions, moose, seals, ravens, tigers, deer, and more. Such diverse animals span the globe, from the Arctic to Antarctica. Learn about the biology of these animals from experts who have spent years studying them in the wild. A series of guest lectures by University faculty, graduate students, and others explores the ecology and behavior of a number of animal species, both familiar and exotic, and provides students a unique opportunity to meet with the authorities on them. **An optional weekend field trip** to the Environmental Learning Center, Isabella, in northeastern Minnesota (**Feb. 1-3**, [cost extra]) will give participants a first-hand look at ongoing research on some animals of Minnesota's north woods. (Limited to 50)

Winter Spec Term Sec 1 **Th**—7-9, Jan. 10-Feb. 28
(8 meetings plus optional field trip),
BellMus 175 (use SW entrance), Nordquist

(Gerda Nordquist, course coordinator, is a graduate student in Ecology and Behavioral Biology)

★IC 0222 IDENTIFYING BIRDS: AN INTRODUCTION TO ORNITHOLOGY. No credit, (3.0 CEUs available), \$78. \$70 for Bell Museum members (*indicate membership number on registration form*).

BELL
MUSEUM
COURSE



By combining classroom time with Saturday field trips, this course provides an opportunity for lab study and observation of birds in their natural habitat. The course is designed to help those interested in birds learn the general principles of field identification, as well as teach them to recognize many of the common species of Minnesota birds. Bird behavior and ecology will also be discussed. There will be four **Saturday trips**: **Fall—Sept. 15** (all day) to Hawk Ridge, Duluth; **Sept. 22, 29** (morning) local; and **Oct. 6** (all day) to Crex Meadows Wildlife Area, Wisconsin. **Spring—Apr. 6** (all day) to Crex Meadows; and **Apr. 13, 20, 27** (morning) local. (Limited to 50)

Fall Spec Term Sec 1 **W**—7-9, Sept. 12-Oct. 17 (6 meetings plus field trips), BellMus 311 (use SW entrance), Blockstein
No late fee through Sept. 5

Spring Spec Term Sec 2 **W**—7-9, Mar. 20-Apr. 24 (6 meetings plus field trips), BellMus 311 (use SW entrance), Rimmer
No late fee through Mar. 13

See IC 0229 for an intermediate course in bird identification

(David Blockstein and Chris Rimmer are graduate students in Ecology and Behavioral Biology)

★IC 0224 WINTER ECOLOGY IN MINNESOTA. No credit, (3.0 CEUs available), \$81. \$73 for Bell Museum members (*indicate membership number on registration form*).

BELL
MUSEUM
COURSE



Combines lectures and field trips to examine the kinds of problems a Minnesota winter creates for living organisms and some of the ways in which these problems are overcome. Two Saturday half-day local field trips and one weekend field trip (**Feb. 16, 17**) to Itasca State Park (cost extra) will give the student an opportunity to observe
(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

characteristics of snow and ice; to identify winter birds, plants, and animal tracks; and to examine mid-winter activities of plants and animals. (Limited to 25)

Winter Spec Term Sec 1 W—7-9, Jan. 9-Feb. 13 (6 meetings plus 3 field trips), BellMus 311 (use SW entrance), Miller
(*Jake Miller is a graduate student in the Department of Ecology and Behavioral Biology*)

★IC 0226 **ECOLOGY AND MANAGEMENT OF MINNESOTA FISH.** No credit, (1.7 CEUs available), \$53. \$48 for Bell Museum members (*indicate membership number on registration form*).

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COURSE



Minnesota, with its thousands of lakes and rivers, supports many different fishes and provides a diversity of fishing experiences. This course examines the biology and ecology of Minnesota sport fishes such as walleye, northern pike, and brook trout, and relates fish natural history to management practice. Learn how general ecological and limnological principles also guide management philosophy. Additional topics include food preferences, population dynamics, habitat preferences, competition between species, and the control of fish enemies. Lectures will be supplemented with slides and films. One Saturday morning field trip (**Feb. 9**) to the St. Paul Fish Hatchery. (Limited to 25)

Winter Spec Term Sec 1 T—7-9, Jan, 8-Feb. 19
(7 meetings plus field trip)
HodsonH 490, StP Campus, Busacker
(*Greg Busacker is a research associate in the Department of Fisheries and Wildlife and teaches fisheries management*)

★IC 0227 **MUSHROOM IDENTIFICATION.** No credit, (1.8 CEUs available), \$67. \$60 for Bell Museum members (*indicate membership number on registration form*).

BELL
MUSEUM
COURSE



new

Designed for persons seeking an introduction to the common fleshy fungi of Minnesota, including edible and poisonous mushrooms. The methods and resources for identifying and collecting mushrooms in the field are stressed. Reasons why mushrooms grow where and when they do are explored. Instruction includes lectures, informal laboratory study, and Saturday field trips to locations where mushrooms are fruiting. Class participants need a 10X to 15X hand lens and a container suitable for collecting mushrooms. **Three half-day Saturday field trips: Sept. 22** to Carlos Avery Wildlife Management Area, **Sept. 29** to Afton State Park, and **Oct. 6** (location dependent on availability of mushrooms). (Limited to 25)

Fall Spec Term Sec 1 M—7-8:30, Sept. 17-Oct. 8 (4 meetings plus field trips), BellMus 175 (use SW entrance), E Stewart, S Stewart
No late fee through Sept. 10

(*Elwin Stewart is a mycologist, and teaches in the Department of Plant Pathology. Sara Stewart is an artist interested in the natural history of mushrooms*)

★IC 0229 **IDENTIFYING BIRDS: AN INTERMEDIATE COURSE.** No credit, (3.3 CEUs available), \$79. \$69 for Bell Museum members (*indicate membership number on registration form*).

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COURSE



A continuation of IC 0222 (*Identifying Birds: An Introduction to Ornithology*), see listing above, and assumes that the student has acquired a basic understanding of the principles of ornithology. The intermediate course will familiarize the student with sight identification, songs, behavior, and ecology of many species of migratory and breeding birds. Emphasis is on experiences with birds in the wild, with more field

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

trips and fewer lecture sessions than the introductory course. There are **six field trips from May 4 through June 8**, including 5 Saturday trips, and one weekend trip to Itasca State Park, Friday evening through Sunday (cost extra—date to be announced). (Limited to 50)

Spring Spec Term Sec 1 **Th**—7-9, May 2, 16, 30
(3 meetings plus field trips),
BellMus 311 (use SW entrance), Fall
No late fee through Apr. 25

(Bruce A. Fall is a graduate student in the Department of Ecology and Behavioral Biology, who has taught several formal and informal courses in ornithology)

★**IC 0235 MINNESOTA BIRDS: ABUNDANCE AND DISTRIBUTION.** No credit, (2.0 CEUs available), \$64. \$58 for Bell Museum members (*indicate membership number on registration form*).

A continuation of IC 0222 and IC 0229, but with a concentration on the distribution and abundance of Minnesota's birds. Learning birds not only means identification but knowing where they are found, when is the best time of year to see certain species, how many species there are in Minnesota, and how many you can expect to see. Birding can be a lifelong hobby if you learn the skills of where, when, and how many birds. Classroom sessions are combined with half-day Saturday field trips. **Fall section: Aug. 25** to Minnesota River Valley National Wildlife Refuge; **Sept. 8**, Lebanon Hills, Dakota County; **Sept. 15**, Sherburne NWR; **Sept. 22**, Rice Lake State Park. All-day field trip during mid-November to view swans and eagles on the Mississippi River. **Spring section: Apr. 13**, Minnesota River Valley NWR; **Apr. 20**, Sherburne NWR; **May 4**, Frontenac State Park; plus a weekend trip (**Apr. 27-28**) to Salt Lake, near Madison, Minn. Short Monday evening field trips from 5 p.m. to dusk to be scheduled. These trips give the advanced observer a chance to increase observational skills and to increase the Minnesota Life List. (Limited to 25)

Fall Spec Term Sec 1 **M**—7-9, Aug. 20, 27, Sept. 10, 17
(4 meetings plus field trips),
BellMus 311 (use SW entrance), Janssen
This class begins before the start of the regular fall term. Registrations will be accepted beginning Aug. 1, in room 180 Wesbrook Hall. Call 376-7500 for more information.

No late fee through Aug. 13

Spring Spec Term Sec 2 **M**—7-9, Apr. 8, 15, 22, 29
(4 meetings plus field trips),
BellMus 311 (use SW entrance), Janssen
No late fee through Apr. 1

(Bob Janssen is editor of The Loon and co-author of Minnesota Birds: When, Where and How Many. He is one of the most experienced field ornithologists in the state)

★**IC 0240 HOW BIRDS WORK: AN INTRODUCTION TO BIRD BIOLOGY.** No credit, (1.4 CEUs available), \$46.

In addition to being lovely to watch, birds are fascinating animals with many interesting and sometimes unique biological adaptations for surviving and thriving in the world around them. Designed for students with a basic knowledge of birds (IC 0222 or equivalent), this course will explore a number of these adaptations,
(continued next page)

new

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

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noncredit courses

including the physiological basis for many common behaviors of birds. Topics include basic anatomy, flight and diving, reproduction, daily and annual rhythms, migration and navigation, and survival in a variety of climates. There will be one Saturday morning field trip to the University Raptor Center, St. Paul campus (date to be arranged). (Limited to 25)

Winter Spec Term Sec 1 **M**—7-9, Jan. 21-Feb. 18
(5 meetings plus field trip),
BellMus 311 (use SW entrance), Lawler
No late fee through Jan. 14

(Ellen Lawler is a research associate in the Department of Veterinary Biology, and has conducted research in poultry and raptors)

IC 0245 LANDSCAPING THE MINNESOTA HOME GROUNDS. No credit, \$36.

Attention is focused on using plants to beautify our Minnesota yards and grounds. Special help for the interested homeowner or business owner/manager to review critically the landscape of home or business and to plan a design to improve the grounds. Requirements for maintaining beauty in the yard will also be examined. For those who enjoy the art of horticulture. **Lectures:** The Art of Landscape Gardening; Designing with Plants; Designing Your Own Yard; Workshop: Maintaining Beauty in Your Yard.

Spring Spec Term Sec 1 **M**—6:30-8:30, Apr. 8-May 6 (5 meetings),
AlderH 310, StP Campus, Ray
No late fee through Apr. 1

(Glenn Ray is executive secretary of the Minnesota Horticultural Society)

IC 0248 HIVES AND HONEYBEES: AN INTRODUCTION TO BEEKEEPING. No credit, \$69.

A practical course in keeping honeybees for pleasure and profit. Lectures include biology and behavior of honeybees; diseases, pests, and predators; first steps in beekeeping, equipment, apiary site; preparing bees for winter; late winter and spring management; horizontal two-queen system; capturing a honey crop; the honey harvest; pollination and pesticides. Two half-day Saturday field demonstrations (**Apr. 20, May 18**) include package bees—how to install and manage; and how to divide colonies.

Spring Spec Term Sec 1 **M**—7-9:30, Apr. 8-May 13
(6 meetings), AlderH 310, StP Campus, Furgala
No late fee through Apr. 1

(Basil Furgala is a professor in Entomology)

IC 0254 SUPER-INSULATED AND OTHER ENERGY EFFICIENT NEW CONSTRUCTION. No credit, \$52.

An in-depth survey of new housing design concepts for homeowners and contractors. Includes discussions on environmental design, earth-sheltered and super-insulated housing, air/vapor barriers, air-to-air heat exchangers, efficient central and zone heating and cooling systems, energy-saving domestic hot water systems, energy conserving appliances, financing new construction, and energy costs projections. Guest speakers from private businesses, organizations, and state agencies.

Fall Spec Term Sec 1 **W**—7-9:30, Oct 3-31 (5 meetings)
FordH 70, Getty

No late fee through Sept. 26
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Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

Spring Spec Term Sec 2 **T**—7-9:30, Apr. 10-May 8 (5 meetings plus field trip), JonesH 2, Getty
No late fee through Apr. 3

(Scott Getty, former director of Ouroboros South, is president of Solatech, Inc., a supplier of low-energy housing products)

★**IC 0263 MINNESOTA GEOLOGY: AN INTRODUCTION TO YOUR SURROUNDINGS.** No credit, (3.3 CEUs available), \$85. \$76 for Bell Museum members (indicate membership number on registration form).

Despite its tame topography, Minnesota has had an active and varied geological history. There have been mountain ranges, inland seas, volcanoes, rifting events, and glaciers. A review of the evidence for these geologic events are presented in lectures illustrated with slides, films, and maps. Appropriate rock and fossil material will be on hand for discussions. Three field trips will cover much of Minnesota's geologic past: a half-day local trip; (**Apr. 13**); one full-day trip to the southeast; (**May 4**); and a two-day (overnight) trip to the North Shore (**May 18, 19**). (Offered in cooperation with the Bell Museum of Natural History. Limited to 25)

Spring Spec Term Sec 1 **Th**—7-9, Apr. 11-May 16 (6 meetings plus field trips), FordH 185, Mooers
No late fee through Apr. 4

(Howard Mooers is a graduate student in the Department of Geology)

IC 0265 INTRODUCTION TO CORAL REEFS. \$55.

Discussion of coral reefs, understanding their structure, function, and management. Geological and biological definitions of reefs, classifications, and differences. Coral reef ecosystem, and community of sponges, corals, mollusks, and fishes. Human impact on coral reefs. Extensive use of color slides brings to life these spectacular tropical marine ecosystems. Offers good background information for individuals interested in snorkeling or scuba diving.

Winter Spec Term Sec 1 **M**—7-9:30, Jan. 14-Feb. 11 (5 meetings), Zoology 102, Barnwell
No late fee through Jan. 7

(Frank Barnwell is an associate professor in the Department of Ecology and Behavioral Biology)

★**IC 0274 NATURE PHOTOGRAPHY: ART, AND TECHNIQUE.** No credit, (2.4 CEUs available), \$66 plus \$7 special fee. Total \$73. \$59 plus \$7 special fee for Bell Museum members. Total \$66 (indicate membership number on registration form)

Covers a wide variety of techniques used in photographing landscapes, flowers, birds, mammals, and insects. Those who enroll should own or have access to a 35 mm camera and have some experience using it. Methods discussed during lecture will be practiced during three Saturday morning field trips. Topics include telephoto and macrophotography, "wet-belly" photography, effective composition, electronic flash, and film and equipment choice. A major theme is how understanding natural history can improve your chances of successfully photographing plants and animals. Designed for those with natural history or scientific interests who want to come home with striking, rather than ineffective, photographs. Class sessions include critiquing of students' slides. There will be three Saturday morning field trips on **Sept. 29, Oct. 6, 13**. (Limited to 25)

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Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

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noncredit courses

Fall Spec Term Sec 1 **T**—7-9, Sept. 25-Oct. 30
(6 meetings plus field trips),
BellMus 175 (use SW entrance), Edinger
No late fee through Sept. 18

(Bruce Edinger is a graduate student in the Department of Ecology and Behavioral Biology, has published his photographs in national and state magazines, and is program chairman for the Minnesota Nature Photography Club)

★**IC 0275 ADVANCED FIELD AND NATURE PHOTOGRAPHY.** No credit, (2.4 CEUs available), \$66. \$59 for Bell Museum members (*indicate membership number on registration form*).



A follow-up for IC 0274; contact the instructor if you have not yet taken that course. Students should have access to a 35mm SLR camera and considerable experience using it. This is a course for advanced nature photographers, field biologists, and naturalists who wish to master more difficult techniques. Sessions include work with near-macro and macro-photography, multiple electronic flash setups and fill-in flash, composition and landscape photography, and wildlife and bird photography. **Three half-day field trips.** (Limited to 25)

Spring Spec Term Sec 1 **W**—7-9, Apr. 10-May 15 (6 meetings plus field trips),
BellMus 175 (use SW entrance), Ash
No late fee through Apr. 3

(Gary Ash is an experienced photographer/naturalist. He teaches photography at the Nature and the Arts Audubon Camp, Wisconsin, and his photographs have been successful in local and international nature photography competitions)

★**IC 0277 NATURAL HISTORY DRAWING.** No credit, (2.2 CEUs available), \$72. \$65 for Bell Museum members (*indicate membership number on registration form*).



Designed to increase the student's understanding and appreciation of nature and art through the drawing of natural objects. Each session begins with a brief introductory lecture followed by a drawing session with informal discussion and critique. Natural history specimens will be the subjects of a series of classically oriented drawing exercises. The museum's exhibits and collections will serve as a rich source of subject material. At every opportunity, the natural history of the specimen at hand will be discussed. Drawings will be presented as a means of both exploring and describing nature. Students will need to purchase some simple and relatively inexpensive drawing materials. Two Saturday morning field trips to the Como Park conservatory and the Minnesota Zoo. (Limited to 25)

Winter Spec Term Sec 1 **T**—7-9, Jan. 22-Mar. 12
(8 meetings plus field trips),
BellMus 311 (use SW entrance), Luce
No late fee through Jan. 15

(Don Luce is a scientific illustrator and exhibit designer at the Bell Museum of Natural History)

IC 0290 HORSES. No credit, \$46 each section.

Lectures and demonstrations by faculty members of the College of Veterinary Medicine and qualified, well-known authorities on horses and horsemanship from the metropolitan area. Lectures in Sec. 1 cover health, care, and diseases of horses. Sec. 2 lectures cover management, training, and showing of horses. Choose one, or take the two as a package. (Meets concurrently with CVM 1100)

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noncredit courses

- Winter Spec Term** Sec 1 **Th**—7:30-9:30, Jan. 10-Feb. 28
(8 meetings), AnScVM 135, StP Campus
- Winter Spec Term** Sec 2 **Th**—7:30-9:30, Mar. 7-May 2
(8 meetings—no meeting Mar. 28),
AnScVM 135, StP Campus
No late fee through Feb. 28

IC 0294 SAILING BASIC TECHNIQUES. No credit, \$66.

If you've ever watched a sailboat breezing along a lake and thought, "I'd like to do that," this course is for you. Designed for the absolute novice, it helps students learn about the beginning techniques of sailing, different kinds of small boats, gear, boating safety, and what it would cost to buy your own sailboat.

- Fall Spec Term** Sec 1 **Th**—7-9, Sept. 27-Nov. 15 (8 meetings),
ClaOff B30, StP Campus, Bodley
No late fee through Sept. 20

IC 0295 SAILING: THE ART AND PRACTICE OF SAILBOAT CRUISING. No credit, \$66.

Designed to acquaint the small boat sailor with the special challenges and opportunities of chartering or owning a cruising sailboat. Will emphasize the "how to" aspects of boat handling and safety, charts and piloting, weather and storms, gear and provisioning, and the differences between small boats and those suitable for cruising on the Great Lakes or coastal waters.

- Winter Spec Term** Sec 1 **Th**—7-9, Jan. 17-Mar 7 (8 meetings),
ClaOff B36, StP Campus, Bodley
No late fee through Jan. 10

(James W. Bodley, Professor of Biochemistry, is a Coast Guard-licensed captain with more than 20 years of sailing experience)

IC 0296 SAILING: MARINE NAVIGATION—COSTAL AND INLAND PILOTING. No credit, \$66.

A course for power boat and sailing enthusiasts who wish to learn the basics of inland and coastal navigation. Among the topics to be covered are plotting, dead reckoning, fixes, tides and currents, and rules of the road. Classes combine lectures with ample hands-on practice to allow refinement of navigational skills.

- Spring Spec Term** Sec 1 **T**—6:30-9, Apr. 9-May 28 (8 meetings),
Arch 15
No late fee through Apr. 2

IC 0300 PHOTOGRAPHING WILDFLOWERS. No credit, \$33.

Wildflower photography for beginners who don't know where to begin, but wish to take satisfying portraits of plants. The workshop includes discussion and demonstrations of basic equipment and techniques, including composition and where and when to look for wildflowers, especially in the Twin Cities area. Discussion is illustrated with slides. On Saturday, May 5, the class will adjourn to the wildflower garden at the Minnesota Landscape Arboretum for demonstration and practice.

- Spring Spec Term** Sec 1 **W**—7-9, May 1 (1 meeting plus field trip),
StCen Aud, StP Campus, Breneman
No late fee through Apr. 24

(Don Breneman, veteran nature photographer, is an associate professor in the College of Agriculture)

new

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

IC 0302 THE BEHAVIOR OF COMMON BIRDS. No credit, \$25.

new

What can you "do" with a bird once you know its name? The mallard, Canada goose, redwing blackbird, tree swallow, and cowbird are so familiar that few people watch them closely, yet these birds exhibit spectacular and entertaining behavior patterns. Observing the redwing blackbird, students can learn to recognize 7 displays and 6 distinctly different calls. The day will be about half indoors, with lectures and slides, and half outdoors, observing several species of birds.

Spring Spec Term Sec 1 **Sa**—8:30 a.m.—4, Apr. 20 (1 meeting),
Wood Lake Nature Center
(735 W. Lakeshore Drive),
Richfield, Sigford
No late fee through Apr. 12

(Ann Sigford is the manager at Wood Lake Nature Center and the author of two books)

Growth and Development

IC 0414 ADVANCED ARTS MANAGEMENT: DECISION MAKING AND CONFLICT IN THE ARTS ORGANIZATION. No credit, \$90.

new

For those with a grasp of the basic principles and skills of nonprofit management. Explores the difficult and challenging decisions confronting those who lead and manage arts organizations in today's complex world. Key factors that affect decision making are explored, including individual management styles, functions and powers of the board and staff, artistic and administrative conflict, and the policies (written and unwritten) of those agencies, public and private, who fund the arts. Examples, case studies, and presentations by leaders of area arts organizations form the core of the course material. A high level of student participation and analysis is expected.

Fall Spec Term Sec 1 **M**—4-6:30, Oct. 1-Nov. 19
(8 meetings), KoltH S134,
Willett-Getsinger, O'Fallon
No late fee through Sept. 24

(Margot Willett-Getsinger is the director of the Center for Local Arts Development and David O'Fallon is the director of Continuing Education in the Arts)

*IC 0416 EFFECTIVE TIME MANAGEMENT. No credit, \$45.

There is an old saying, "If you want something done, ask a busy person to do it." That busiest person is an efficient manager of time. Learn the time management "tricks" that work for busy people. Discover new freedom through management of your total personal-work time. (Limited to 30)

Winter Spec Term Sec 1 **M**—6:30-8:30, Jan. 14-Feb. 5 (4 meetings),
FordH 115, Kroll
No late fee through Jan. 7

(Patrick Kroll is an assistant professor in the Science, Business, and Mathematics division of the General College)

IC 0417 DEALING WITH JOB STRESS. No credit, \$41.

Turn boredom and discomfort into comfort and excitement. More than half of all stress and dissatisfaction on the job is related to nonproductive behaviors. Improving personal productivity is the single most effective method of dealing with job stress. Much of the remaining stress is related to poor lifestyle. Changing into a healthier lifestyle is another powerful tool for dealing with job stress. For the remaining,

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noncredit courses

seemingly irreducible stresses, this course teaches participants to select and apply appropriate stress management or satisfaction enhancement techniques. A final plan for improving productivity, reducing stress, increasing job satisfaction, and reducing health risks is developed by each participant.

Fall Spec Term Sec 1 **Sa**—8 a.m.—12, Oct. 20—Nov. 10,
EBCEC 52, StP Campus
No late fee through Oct. 12

★IC 0427 CREATING AN EFFECTIVE SLIDE SHOW. No credit, \$51.

Tired of having people fall asleep when you show your vacation or business slides? Learn how to produce an exciting slide presentation on a topic of your choice. Course is designed for amateur photographers, as well as for business and professional people who have to make presentations. Topics include presentation formats, storyboarding and scripting, budgeting, location photography, presentation graphics, narration and sound track production. Students must provide their own 35mm camera and portable cassette recorder. (Limited to 20.)

Winter Spec Term Sec 1 **W**—7-9, Jan. 16—Feb. 20 (6 meetings),
CentLib 4, StP Campus, Breneman
No late fee through Jan. 9

(Don Breneman, Associate Professor in the College of Agriculture at the University, and Extension Community Specialist, is a veteran photographer)

new

Free

Back-to-School Workshops **August 23 or March 9**

If you have been thinking about going back to school and don't know where to begin, plan to attend one of these informal workshops. Whether you have had some college or none at all or if you are thinking about exploring a career change, you will find answers to questions about courses, degrees, certificates, financial aids, and other student services. Find out how vocational testing can help you get started. A tour of campus and Wilson Library will help acquaint you with the University.

If you are not confident about how to study, find out what kind of help you need. You'll learn about free tutoring in note taking, outlining, theme writing, reading, grammar, or whatever help you need to complete a course.

The workshop is informal with plenty of time for questions and answers. Parking at indoor rates is usually available in the underground garage of the same building where the workshop meets (Nolte Center). Or park outside about a block and a half away in the pay lot on 4th Street at 17th Avenue S.E. If you are not familiar with campus, call for directions and a map: **376-7500**.

The August workshop will be held Thursday, August 23, 6-9:30 p.m., in room 140 of the Nolte Center, on the corner of Pillsbury Drive and Church Street (17th Avenue S.E.). The March workshop is scheduled on the St. Paul campus, room 155 of the Earle Brown Continuing Education Center, from 8:30 a.m. to 1 p.m., Saturday March 9.

A Continuing Education and Extension counselor will be there to tell you about opportunities in Extension Classes, Independent Study correspondence and media courses, Continuing Education for Women programs, and a host of other Continuing Education opportunities at the University.

The director of the Reading/Writing Skills Center will answer questions about study skills help and demonstrate in small groups the tutoring program available.

To add your name to the registration list for this free workshop, just give us a call at:

376-7500

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noncredit courses

IC 0435 POETRY WRITING. No credit, \$54.

The two primary goals of this course are to gain skills in self-expression and to foster an ongoing love affair with language. In a workshop format, students will discuss student writing and examples from small press publications. Forms of writing we pursue depend in part on student interest; but poetry, prose-poetry, and short poetic prose are stressed.

Winter Spec Term Sec 1 **W**—7-9, Jan. 16-Feb. 20 (6 meetings),
JonesH 1, Clayton
No late fee through Jan. 9

IC 0436 MAGAZINE WRITING. No credit, \$63.

The rapidly growing world of magazines provides many opportunities for the freelance writer. This practical course helps you get started by treating topics such as how to get article ideas; types of articles; writing techniques; how to query an editor; writing ethics and etiquette; manuscript submission. Class format consists of lecture, discussion, and critiques of students' work.

Fall Spec Term Sec 1 **Th**—6:30-9, Sept. 27-Nov. 15 (8 meetings),
FordH 60, Clapp

(Betty Clapp is an instructor in Journalism and Mass Communication at the University)

IC 0439 CREATIVE WRITING. No credit, \$44.

A course for those interested in writing plays, poetry, novels, or other forms of fiction. It deals with methods to tap the creative process, imagination, and ways to surround ourselves with an environment to enhance our writing.

Fall Spec Term Sec 1 **T**—7-9, Oct. 2-Nov. 6 (6 meetings),
FordH 150, Balfour
No late fee through Sept. 25

(Conrad Balfour is an instructor in the General College)

★IC 0440 HOW TO MARKET YOUR PHOTOGRAPHS. No credit, \$46.

Taught by free-lance photographer Rohn Engh, this course tells you what you need to know to sell your photos, and how to start up a photo marketing business. The difference between a photograph and a marketable photograph is thoroughly discussed. This is a marketing course and there is little emphasis on picture taking itself; participants should already have knowledge of how to take a good photograph. No camera is necessary. (Limited to 50)

Fall Spec Term Sec 1 **WTh**—6:30-9:30, Oct. 3, 4
(2 meetings),
EBCEC 155, StP Campus, Engh
No late fee through Sept. 26

Spring Spec Term Sec 2 **TW**—6:30-9:30, Apr. 9, 10
(2 meetings),
EBCEC 155, StP Campus, Engh
No late fee through Apr. 2

(Rohn Engh is the author of Sell and Re-Sell Your Photos)

★IC 0441 NEWSLETTER WRITING. No credit, \$40.

Does your association, business, club, or organization issue a newsletter? Gain or improve your newsletter skills with this course. Class sessions include lectures and

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noncredit courses

discussions on how to write articles for your newsletters, how to develop skills and techniques to write informative and interesting material for your publication, how to set up a schedule, and the importance of lead sentences and paragraphs. Sources of information for articles, writing good headlines, and the kinds of information best suited for you readership. (Limited to 25)

Fall Spec Term Sec 1 **M**—7-9, Oct. 1-22 (4 meetings),
FordH 70, Clapp

No late fee through Sept. 24

Spring Spec Term Sec 2 **W**—7-9, Apr. 10-May 1
(4 meetings),
MinMet 124, Clapp

No late fee through Apr. 3

(Betty Clapp is an instructor in Journalism and Mass Communication at the University)

IC 0442 PUBLICITY FOR COMMUNITY ORGANIZATIONS. No credit, \$43.

Your organization has planned a special event and you are in charge of publicity. What do you do? Learn the dynamics of working with the media—what publicity can and cannot do. Especially for community organizations and nonprofit groups who have little budget for publicity. Learn how to develop a publicity plan; clarify your message; work with radio and television; write public service spots; write effective press releases and lead paragraphs, and build working relationships with newspapers; use publicity photos, press conferences, on-site coverage. The dos and don'ts of publicity.

Winter Spec Term Sec 1 **Th**—7-9, Jan. 17-Feb. 14
(5 meetings), LindH 203, Clapp
No late fee through Jan. 10

(Betty Clapp is an instructor in Journalism and Mass Communication at the University)

IC 0445 LAYOUT AND PASTEUP FOR BEGINNERS. No credit, \$43.

How to create an effective and attractive newsletter, poster or brochure for your organization, business, or club. Techniques of layout including various formats; papers; printing processes; instant lettering and photo typesetting; art and photography; selecting type sizes and styles for legibility and readability; pasteup for camera-ready copy; postal regulations; and working with your printer.

Fall Spec Term Sec 1 **T**—7-9, Sept. 25-Oct. 23
(5 meetings), Arch 40, Anderson

Spring Spec Term Sec 2 **W**—7-9, Apr. 10-May 8
(5 meetings), BuH 125, Anderson
No late fee through Apr. 3

(Janice Anderson, a commercial artist, is a teaching specialist in the Department of Design)

★IC 0450 CAREER DECISIONS: STRATEGIES FOR CHANGE. No credit, \$54.

Take the first step toward assessing your career, your goals, and yourself in relation to your career. This course focuses on values, job satisfaction, job stress, skills analysis, and person-environment fit as key elements of the decision to stay where you are or make a change. Explores educational and training opportunities that are available.

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Interest testing included. Attention directed to learning ways to explore career alternatives and to "creative job-search" techniques. (Limited to 25)

Winter Spec Term Sec 1 **W**—6:30-8:30, Jan. 16-Feb. 20 (6 meetings),
FordH 40, Peterson
No late fee through Jan. 9

(Susanne Peterson is a licensed psychologist on the staff of Extension Counseling)

★IC 0531 YOGA AND MEDITATION. No credit, \$60.

The Yoga tradition, codified by the Indian sage Patanjali, is a systematic method of self-unfoldment. Yoga practices include the careful observation and gradual mastery of elements of the personality; body movement and posture, breathing, physical and mental relaxation, and the nature of mind and consciousness. Course will give beginning practices in physical yoga and meditation; lecture on history and philosophical concepts. (Limited to 30)

Fall Spec Term Sec 1 **M**—6:30-8:30, Oct. 1-Nov. 5 (6 meetings),
NCCE 229, Sovik
No late fee through Sept. 24

(Rolf E. Sovik is executive director of the Center for Higher Consciousness and has an advanced teacher certification from the Himalayan Institute Teachers' Association)

IC 0539 EFFECTIVE LOBBYING. No credit, \$44.

Provides practical hints on how to be influential in shaping public policy with specific reference to Minnesota. Sessions focus on four main areas: legislative decision making, lobbying techniques, regulation of lobbying, and shaping public opinion. Topics include legislative personnel and procedure, lobbying tactics, testifying at hearings, lobbyist reporting requirements, helping choose candidates, campaign assistance, limitations on political contributions, researching public opinion, and becoming an opinion leader.

Winter Spec Term Sec 1 **T**—7-9, Feb. 5-26 (4 meetings),
SocSci 1383, Backstrom
No late fee through Jan. 29

(Charles Backstrom is a professor in Political Science at the University)

IC 0541 SOIL POLLUTION AND PUBLIC POLICY. No credit, \$45.

Round table discussions of public policy issues. Lecture topics include: The Weird Hydrology of Karst, Dirtying the Groundwater in S.E. Minnesota, What to Do with Toxic Wastes, the Physical and Chemical Processes of Leaching, and the Ins and Outs of Nitrogen. (Meets concurrently with Soil 3118)

new

Fall Spec Term Sec 1 **T**—6:30-8:30, Sept. 25-Nov. 27
(10 class meetings),
Soils 321, StP Campus, Adams

(Russell S. Adams, Professor, Department of Soil Science, is the course coordinator)

IC 0574 SMALL LANDLORDS: RIGHTS, REMEDIES, AND OBLIGATIONS TO TENANTS.
No credit, \$66.

Intended for landlords and landladies who own small rental income properties. There are no prerequisites for the course; the course is designed specifically for laypersons, i.e., those who have had no previous legal courses. The following topics will be included: What to do before the tenant moves in; leases and rental

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noncredit courses

agreements; Landlords' rights, remedies, and obligations; Tenants' rights and obligations; Who is responsible for making repairs, and redecorating; Housing code; Liability for personal injuries; Landlord identification; abandonment by tenant; Eviction by landlord; Unlawful detainer; Constructive eviction; What to do immediately before and after tenant moves out; Security deposits—prepayment of rent; and use of conciliation court.

Fall Spec Term Sec 1 **M**—6:30-9, Oct. 1-Nov. 19 (8 meetings),
NichH 122, Egge
No late fee through Sept. 24

(Trygve Egge is an attorney and real estate broker)

★IC 0576 FARM MANAGEMENT FOR THE ABSENTEE LANDOWNER. No credit, \$59.

Designed for the absentee landowner, persons considering purchase of a farm, or those who may some day inherit one. Course content provides up-to-date management information and techniques so that: (1) persons considering purchase or sale of a farm will make better informed decisions and (2) absentee landowners will be able to take a more active and better informed role in establishing cash and crop-share rental arrangements in working with their tenants. Sessions also include discussions of current crop production costs, income and estate taxes, choosing and working with the right tenant, buying and selling a farm, evaluating rental arrangements, and other selected topics. (Limited to 40)

Spring Spec Term Sec 1 **Th**—7-9, Apr. 11-May 16 (6 meetings),
ClaOff B35, StP Campus, Thomas, Hasbargen
No late fee through Apr. 4

(Kenneth H. Thomas is an Extension Economist in Farm Management in the Agricultural and Applied Economics Department; and Paul Hasbargen is a professor in Agricultural and Applied Economics)

IC 0577 GETTING STARTED IN PART-TIME FARMING. No credit, \$49.

For the person or family considering a move to the country with a possibility of part-time farming as a hobby or supplemental income source. Topics include the pros and cons of a part-time farming lifestyle; tax management and the potential tax savings of owning one's own business, including what to do from a tax standpoint when purchasing a farm. Enterprise selection—the relative economic merits of various crop and livestock enterprises; where to go for professional help and sources of information of use in getting started as a part-time farmer. Marketing problems and potentials. The economics of purchasing machinery versus hiring others to work for you. The legal side of farming; insurance, finance, estate planning considerations. What to look for in buying farm property, inflation considerations, location, soil types and determining your maximum bid price for land.

Spring Spec Term Sec 1 **Th**—7-9, Apr. 11-May 9 (5 meetings),
ClaOff B36, StP Campus, Fuller
No late fee through Apr. 4

(Earl Fuller is an Extension Economist in Farm Management in the Agricultural and Applied Economics Department)

IC 0581 SPANISH FOR TRAVELERS. No credit, \$49.

A survival course for those with no previous knowledge of Spanish. Will provide you with the basic Spanish vocabulary necessary for coping with everyday travel situations: changing money, obtaining train tickets and information, renting hotel

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rooms, shopping, ordering meals, asking directions, understanding telephones, post offices, and public transportation systems. Increased knowledge of Spain, Latin American, and of Hispanic culture will help you travel more adventurously and more economically. Emphasis will vary from area to area within the Hispanic world.

Fall Spec Term Sec 1 **M**—7-8:40, Oct 1-Nov. 5 (6 meetings),
FolH 207
No late fee through Sept. 24

IC 0582 FRENCH FOR TRAVELERS. No credit, \$49.

A survival course for those with no previous knowledge of French. 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, 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.

Spring Spec Term Sec 1 **W**—7-8:40, Apr. 10-May 15 (6 meetings),
FolH 208
No late fee through Apr. 3

IC 0583 GERMAN FOR TRAVELERS. No credit, \$49.

A survival course for those with no previous knowledge of German. Will provide you with a basic German vocabulary necessary for coping with everyday travel situations: changing money, obtaining train tickets and information, renting hotel rooms, shopping, ordering meals, asking directions, 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.

Spring Spec Term Sec 1 **W**—7-8:40, Apr. 10-May 15 (6 meetings),
CivMinE 213, Schulte-Sasse
No late fee through Apr. 3

(Linda Schulte-Sasse is a doctoral candidate in German and has traveled and lived in German-speaking countries)

IC 0584 ITALIAN FOR TRAVELERS. No credit, \$49.

A survival course for those with no previous knowledge of Italian. Will provide you with the basic Italian vocabulary necessary for coping with everyday travel situations: changing money, obtaining train tickets and information, renting hotel rooms, shopping, ordering meals, asking directions, understanding telephones, post offices, and public transportation systems. Increased knowledge of Italian will help you to travel more adventurously and more economically.

Winter Spec Term Sec 1 **W**—7-9, Jan. 16-Feb. 20
(6 meetings), FolH 303, Gulino
No late fee through Jan. 9

(Rosanne Gulino, an advanced graduate student in the Department of Classics, has lived in Italy and is fluent in the language)

★IC 0590 RAPID READING AND COMPREHENSION. No credit, \$54 plus \$5 course fee. Total \$59.

For people with average to good comprehension who want to improve their reading rate (generally, the minimal gain is a doubling of their original reading speed) without loss of comprehension. The course emphasizes long-term gains and is therefore both
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academically oriented with lectures that provide insight into the underlying mechanism at work in rapid reading, and practically oriented with readings, drills, and exercises that enable participants to continue the development of their reading skills on their own after the course is finished. (Limited to 20)

Winter Spec Term Sec 1 W—6-9, Jan 16-Feb. 6 (4 meetings),
NichH 201, Rosenberg
No late fee through Jan. 9

(Elisabeth Rosenberg has an M.A. degree in History and English. She has taught reading in the General College and is at present doing doctoral work in education with reading as her specialty)

IC 0592 WHICH HOME COMPUTER TO BUY? No credit, \$49.

Are you in the market for a micro-computer? Are you confused by the multitude of choices available to you? This course is for you. Students will learn how to identify specific computer needs, what to look for when purchasing software, types of hardware available, and demonstrations of equipment.

Fall Spec Term Sec 1 T—7-9, Oct. 2-30 (5 sessions), AkerH 319,
Marker
No late fee through Sept. 25

(Carolyn Marker is a senior systems analyst, Audio-Visual Library Service, University of Minnesota)

★IC 0593 HOW TO GET THE MOST OUT OF YOUR HOME COMPUTER. No credit, \$49.

If you own or are going to buy a microcomputer, this course is for you. It includes lectures, discussion, and activities that give you experience in loading and running a variety of programs on an Apple Microcomputer. Flowcharting of existing applications programs are used to provide insight into ease of running programs on the laboratory micros. Students are introduced to several commonly used programs and are given an opportunity to experience running a problem on the program. The course culminates in a discussion about the attributes of various systems and their realistic applications. (Limited to 20)

Spring Spec Term Sec 1 W—7-9, Apr. 3-May 1 (5 meetings),
PeikH 355, Philipson
No late fee through Mar. 27

(Willard Philipson is a professor in the Curriculum and Instructional Systems division of the College of Education)

IC 0594 COMPUTING: WHAT IS IT? No credit, \$45 plus \$5 course fee. Total \$50.

Using plain English, the basic concepts of computing are explored. Introduces computing terminology; shows you what computers look like; explains how and why they work; tells what computers are and are not capable of doing; describes what you must know to use a computer. Provides a first opportunity to use a computer; discusses the impact and ethics of computing; encourages you to think of ways you could use computers more. Designed for anyone who knows little or nothing about computers.

Fall Spec Term Sec 1 W—6:15-8:30, Sept. 26-Oct. 17
(4 meetings), ApH 150, Giese
No late fee through Sept. 19

Winter Spec Term Sec 2 Sa—9:30 a.m.-11:45, Jan. 12-Feb. 2
(4 meetings), ApH 150, Giese
No late fee through Jan. 4

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Spring Spec Term Sec 3 **Th**—6:15-8:30, Apr. 4-25 (4 meetings),
ApH 150, Giese
No late fee through Mar. 28

(David Giese is a professor in the General College and division head in the Department of Science, Business, and Mathematics)

★**IC 0596 INTRODUCTION TO WORD PROCESSING.** No credit, \$43 tuition plus \$11 special fee. Total \$54.

A word processor is like an electronic typewriter with a screen. It enables you to enter letters, memos, papers, and reports, make corrections on them, and print them on paper. The information you type on a word processor is stored on a magnetic disk instead of on paper. This system gives you flexibility in making changes without having to retype entire pages. Word processors are used by secretaries, writers, educators, or anyone who has to prepare written documents. This course provides 10 hours of hands-on experience with word processing and teaching you the basics of operating and using the system. All students must attend the first class session (Mon., Sept. 24 in the fall or Mon., Jan. 14 in the winter, HckrH 329, StP Campus, 6-8). Thereafter, register for one lab section. (Each section limited to 7)

new

Fall Spec Term Sec 1 **T**—6-8, Sept. 25-Oct. 23
(5 lab sessions),
HckrH 329, StP Campus, Winkler
No late fee through Sept. 17

Sec 2 **W**—6-8, Sept. 26-Oct. 25
(5 lab sessions),
HckrH 329, StP Campus, Winkler
No late fee through Sept. 17

Sec 3 **Th**—6-8, Sept. 27-Oct. 25
(5 lab sessions),
HckrH 329, StP Campus, Winkler
No late fee through Sept. 17

Winter Spec Term Sec 4 **T**—6-8, Jan. 15-Feb. 12
(5 lab sessions),
HckrH 329, StP Campus, Winkler
No late fee through Jan. 7

Sec 5 **W**—6-8, Jan. 16-Feb. 13
(5 lab sessions),
HckrH 329, StP Campus, Winkler
No late fee through Jan. 7

Sec 6 **Th**—6-8, Jan. 17-Feb. 14
(5 lab sessions),
HckrH 329, StP Campus, Winkler
No late fee through Jan. 7

(Victoria Winkler is an associate professor in Rhetoric at the University)

IC 0600 ORIENTATION FOR TRAVELERS TO EUROPE. No credit, \$26. (\$50 for two people from same household).

Are you planning to travel to Europe in summer, 1984? Get more out of your trip by doing some advance planning. Learn all about essential and recommended travel documents, the latest ideas on how and what to pack, how the European train system
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works, accommodations options, off-the-beaten-track places to visit, and more. Learn, too, about how to be a traveler instead of a tourist. This all-day workshop is conducted by experienced staff of the International Study and Travel Center. (A joint ISTC/Extension Classes class)

Spring Spec Term Sec 1 **Sa**—8:30 a.m.-4, May 4 (1 meeting)

CMU Third Floor, Johnson

No late fee through Apr. 26

(Stephen Johnson is associate director of the International Study and Travel Center)

IC 0602 THE ANCIENT AND MODERN MAYA: AN ORIENTATION TO MEXICO'S YUCATAN PENINSULA. No credit, \$47.

An introduction to the rich cultural heritage of the southeastern area of Mexico from 1000 B.C. to the present. Explore both well-known and virtually unexplored archaeological sites through extensive slide lectures. The course presents current theories of the collapse of a civilization that once populated the forests more densely than the current population density of the Twin Cities area. This course should help any traveler—whether armchair or intrepid explorer—feel more at home in the archaeological zones, thatch-roofed villages, markets, museums, and colonial churches of Yucatan.

Winter Spec Term Sec 1 **W**—7-9, Jan. 16-Feb. 20 (6 meetings), FordH 60,

Messenger

No late fee through Jan. 9

(Skip Messenger is a graduate student in Anthropology. He has extensive travel experience in Mexico and Central America and has worked on archaeological projects in Mexico, Honduras, and Belize)

IC 0603 THE SOVIET UNION TODAY. No credit, \$54.

The Soviet Union looms larger than ever before on the American horizon as we look into the 1980s. Yet while our judgments about the internal and foreign affairs of that country have an influence on U.S. policies, we remain insufficiently informed about its history and the complexity of its current situation. This course offers an overview of key problems of recent Soviet history and affairs and, in the process, introduces the student to the diversity of opinions and interpretations about the nature of the Soviet Union. Each session presents a lecture followed by a question-and-answer period on a main problem in today's Soviet Union. Topics covered include recent trends and directions in Soviet politics; Soviet policy and the West; the military in Soviet life and politics; the Soviet economy; culture and the arts; and social, ethnic, and intellectual ferment in the 80s.

Fall Spec Term Sec 1 **Th**—7-9, Sept. 27-Nov. 1 (6 meetings)

FordH 150, Hayes

No late fee through Sept. 20.

(Nicholas Hayes is the executive director of the Associated Colleges of the Twin Cities and a specialist in the history of the Soviet Union)

IC 0604 BURIED CITIES OF THE ANCIENT ROMANS: POMPEII, HERCULANEUM. No credit, \$47.

The catastrophic events of August 24, 79 A.D., that submerged Pompeii and Herculaneum (as well as many pleasure villas and working farms along the Bay of Naples) in an avalanche of ashes, pumice, and volcanic mud, brought life in these prosperous centers to a sudden and total stop. Unearthed by archaeologists over the centuries, these once-buried cities have revealed a wealth of information about daily

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new

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life during the early Roman Empire. In this course students explore through slide lectures and discussion the activities, interests, and beliefs of the ancients as evidenced from the primary sources: archaeology, art, inscriptions, including graffiti and literature. In addition, various aspects of modern Italian life will be considered for providing possible interpretations of the archaeological record.

Fall Spec Term Sec 1 T—7-9, Oct. 2-Nov. 6
(6 meetings), MechE 221 Gulino
No late fee through Sept. 25

(Rosanne Gulino, an advanced graduate student in the Department of Classics, has done extensive research on Pompeii)

Free Library Course

Using the library efficiently is essential whether you are looking for a single fact or for many varied information sources. Learn to save time and effort in the library with the free, two-session library course offered each quarter. The instructor for this noncredit course is Assistant Professor Marcia Pankake of the University Libraries.

Everyone is welcome. No preregistration is necessary. Call 376-7500 for campus and parking maps.

Part I Everyone's Guide to the Whole Library

Characteristics of various types of libraries in the Twin Cities; different kinds of library services and materials; how libraries are organized; major types of information sources and access to them; how to use library catalogs; how to use periodical indexes.

Part II The Whole Library Is More Than The Sum of Its Parts

Building on the principles presented the previous week, this session presents reference books and how to discover and use them; guides to reference literature; search strategy; using the library for research.

Fall Qtr T—Oct. 2, 9, 6:30-9, Mgmt/Econ 160, Pankake
Winter Qtr W—Jan. 16, 23, 6:30-9, Mgmt/Econ 160, Pankake
Spring Qtr T—April 9, 16, 6:30-9, Mgmt/Econ 160, Pankake

Study and Travel Adventures

If you like to travel, have an interest in a particular place, or would like a tour with a difference, **Study and Travel Adventures** are for you. Every tour is conducted by an instructor who is an expert in the field. That expertise, combined with pre-trip lectures and limited tour size, ensure valuable interaction among students and instructors for a memorable trip. You are able to combine the pleasures of a vacation with the satisfactions of learning. Study and Travel Adventures come in a variety of packages—ranging from two days to two weeks. All trips are limited in size and fill quickly. Reservations are taken on a first-come, first-served basis. Call now (376-7500) for a **detailed itinerary**. Registrations will be accepted in room 180 Wesbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455. (All costs listed are based on the best information available at the time of printing and are approximate only. Costs and details are subject to change without notice.)

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- ★IC 0919 **A WINTER BIRDING AND NATURAL HISTORY TOUR OF SOUTH TEXAS.** No credit. No tuition. \$700 (approximate) special fee (*includes surface transportation in Texas, 7 nights lodging [double occupancy], entrance fees, one pre-trip lecture*). Total \$700.

South Texas has a justifiable reputation as one of the premier birding areas in this country. Over 15 Mexican bird species found nowhere else in the United States can be expected during winter plus more than 30 others that occur very rarely or not at all in Minnesota. In winter, the weather is typically mild; waterfowl are abundant, and shore birds, wading birds, and many species of songbirds are common. In addition to a wide variety of birds, south Texas also has many interesting plants, mammals, reptiles, and invertebrates, and time will be spent observing these as well. Students visit Padre Island; Falcon Dam; and Aransas, Laguna Atascosa, and Santa Ana National Wildlife Refuges, plus other less-well-known areas. (Limited to 16)

Winter Spec Term Sec 1 Dec. 29-Jan 6, Fall

(Trip leader is Bruce A. Fall, an ornithologist who has spent several years in south Texas conducting research on birds, mammals, and plants. David Blockstein, assistant leader, is an ornithologist and graduate student in the Department of Ecology and Behavioral Biology)

- ★IC 0920 **THE BIRDS AND NATURAL HISTORY OF COASTAL MAINE.** No credit. No tuition. \$870 (approximate) special fee. Total \$870.

Coastal Maine conjures up images of rock-bound coasts, picturesque harbors, and sturdy lobster fishermen. In addition to its scenic beauty, coastal Maine in July offers landlocked birders the exciting opportunity to see many sea bird species that are breeding at this time of year. The trip emphasizes identification and natural history of sea birds while touring coastal areas, and includes a boat trip to seek out pelagic species such as puffins, auks, petrels, and murre; two species of seals also may be seen from the boat. Also, many songbirds breed in New England, including six species of warblers that are rare or absent in Minnesota. Time will be spent hiking to locate as many of these as possible. There also will be opportunities for students to get their feet wet and explore the diverse plant and animal life of the rocky intertidal zone. (Limited to 14)

Summer Spec Term Sec 1 July 7-13, Eliason

(Roger Eliason, group leader, is a field biologist and experienced birder who lived and birded in Maine for four years while attending Bowdoin College)

- ★IC 0923 **THE WILDLIFE AND WILDLANDS OF ALASKA.** No credit. No tuition. \$1,690 (approximate) special fee (*includes all transportation, lodging, breakfasts, and one pre-trip lecture*). Total \$1,690.

An adventure to our 49th state, Alaska, where nature puts on a spectacular showing of unmatched scenery and abundant wildlife. The word Alaska is almost synonymous with wilderness—a land of dense, green forests, rugged mountains, blue-white glaciers, and wildlife galore—bears, caribou, trumpeter swans, arctic loons, and whales, to name a few. The 10-day study tour will include the identification and natural history of Alaskan fish, birds, mammals, and the vegetation of the major biomes. Land use challenges and controversies, such as the subsistence hunting and fishing by native Alaskans and petroleum development. The tour will be based in Anchorage with two-day trips to Denali National Park (including Mt. McKinley, North America's highest mountain), the Kenai National Moose Range, and Prince William Sound, which includes a boat trip to view the Columbian glacier. Time will also be planned for participants to explore on their own. (Limited to 15)

Summer Spec Term Sec 1 July 6-15, 1985, Cooper

(Leading the study-tour is James Cooper, associate professor of wildlife at the University of Minnesota, who has visited Alaska many times where he has done extensive wildlife research, particularly on the trumpeter swan)

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Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

IC 0925 GARDENS OF THE DELAWARE VALLEY. No credit. No tuition. \$775 special fee (includes lodging, transportation in Delaware, some meals, on-site lectures, one pre-trip orientation). Total \$775.

Explore the "Cradle of American Horticulture." Visit gardens of many diverse styles at the peak of spring bloom. Rhododendrons, azaleas, dogwoods, and spring flowering bulbs create an atmosphere of paradise. Emphasis is on garden style, both from a historic and aesthetic point of view; and on our heritage that is preserved in these great U.S. gardens. The trip includes several days in Wilmington, Del., to visit the Hagley Museum—a garden and mansion located on the scenic Brandywine River; the mansion of Alfred J. du Pont with its unsurpassed garden in the French formal style; and Longwood Gardens, America's finest display garden. In addition, the tour includes several days in Philadelphia to visit the Japanese Garden, the Pennsylvania Horticultural Society's Colonial Garden, and more.

Spring Spec Term Sec 1 **May 4-11**, Sladky

(Roberta Sladky is Director, College of Biological Sciences Greenhouse. She lived for two years in the Delaware Area)

★IC 0926 THE NATURAL HISTORY AND CULTURE OF PERU. No credit. No tuition. \$2,500 (approximate) special fee (includes all transportation, all lodging [double occupancy], some meals, one pre-trip lecture). Total \$2,500.

Peru, with its tropical Amazonian rain forests, sky-high Andes, and coastal deserts, provides members of this study tour a tantalizing glimpse of diverse plant and animal life and the cultural heritage of ancient civilizations. The natural history of the areas visited is emphasized, especially the bird life, and there will be opportunities to visit Cuzco, the fabled capitol of the Inca Empire, the nearby ruins of Sacsayaman, Tambomachay, Macchu Pichu (the lost city of the Incas), Ollantaytambo, the native markets of Pisac and Chinchero, and the museums of Lima. This unique study tour includes the tropical rain forests of the upper Rio Madre de Dios where participants will stay in the heart of the Tambopata Wildlife Reserve. From these lowland forests, the group will climb to Cuzco and the Huaparcay Lakes Region at 10,300 feet above sea level where students will see the rugged Andes, Alpine regions, and finally the montane cloud forests where the group will be able to see an incredible array of hummingbirds, tanagers, and creepers. An overnight visit to Macchu Pichu will cap off the Andean portion of the trip. The tour concludes with a visit to the national park at Paracas where conditions are ideal for viewing sea birds and shore birds. (Limited to 14)

Fall Spec Term Sec 1 **Oct. 14-30**, Corbin

(Group leader Kendall W. Corbin, Professor of Ecology and Behavioral Biology, has had many years of research experience in Peru)

★IC 0927 EGYPT OF THE PHARAOHS. No credit. No tuition. \$3,000 (approximate) special fee (includes all transportation, all lodging [double occupancy], entrance fees, one pre-trip lecture). Total \$3,000.

A study-travel tour of the monuments of ancient Egypt, this program is designed for travelers interested in the unique history and cultures of ancient Egypt. The tour combines lectures from archaeologists who have worked in Egypt with personal free time for relaxation and shopping in the bazaars of modern Egypt. In Cairo, visit the Egyptian Museum as well as the pyramids and sphinx at Giza. From Cairo travel south to Luxor and Karnak, Aswan and Abu Simbel, and cruise on the Nile. A visit to Alexandria is also included to view the Graeco-Roman ruins. (Limited to 24)

Winter Spec Term Sec 1 **Feb. 3-17**, Coulson and Wilkie

(Group leaders William Coulson, Department of Classics, and Nancy Wilkie, instructor at Carleton College, are both archaeologists who have just completed a five-year project of excavation and survey at Naukratis in the western Nile Delta)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

noncredit courses

- IC 0928 SPECTACLE OF WILD GEESE: A WEEKEND FIELD TRIP.** No credit. No Tuition. \$25 (approximate) special fee (includes on-site lectures). Total \$25.

Harbringers of spring and fall, flights of wild geese are both spectacular and mysterious. Where are they going? Where have they been? These and other topics are to be discussed on this weekend trip to Sand Lake National Wildlife refuge in northeastern South Dakota and western Minnesota. Sand Lake is where more than a million Lesser Snow Geese, thousands of Canada geese, and some White-fronted and Ross' Geese stop during their annual migration from wintering grounds to breeding grounds. To hear and see so many birds at once is an experience few forget.

Spring Spec Term Sec 1 April 6-7, Cooper

(Jim Cooper, group leader, is an associate professor in Fisheries and Wildlife and has done extensive research on Canada geese in the Midwest, and on the trumpeter swan in Alaska)

- ★IC 0929 ROME OF THE CAESARS.** No credit. No tuition. \$2,350 (approximate) special fee (includes all transportation, all lodging [double occupancy], entrance fees, one pre-trip lecture). Total \$2,350.

A study-travel introduction to the culture and history of Imperial Rome as revealed through the ancient monuments. Spend five days in Rome exploring the emperors' palaces, business centers, temples, triumphal arches, sports arenas, and tombs. A day excursion to Hadrian's villa at Tivoli, an imperial pleasure estate comprising a complex of glimmering pools, colored marbles, and underground passages. A trip to Ostia, the port city of Rome, will evidence the operations behind a world empire: offices of international corporations, granaries to store Rome's food supply, and multi-storied apartment buildings. A four-day excursion south to experience the sites of Pompeii, Herculaneum, and villas destroyed by Vesuvius. A visit to Tiberius' villa atop the cliffs at Capri overlooking the picturesque Bay of Naples, and a trip up Mount Vesuvius are also included. Emphasis will be on examining the physical remains: archaeology, art, and inscriptions, including graffiti, for gaining an on-site introduction to the world of Imperial Rome. (Limited to 20)

Winter Spec Term Sec 1 March 16-27, Gulino

(Rosanne Gulino, group leader, is an advanced graduate student in the Department of Classics, and has done extensive research on Pompeii. In 1982-83 she was an instructor at the Intercollegiate Center for Classical Studies at Rome where she taught Latin and Roman Archaeology)

- ★IC 0930 MUSIC FESTIVALS OF AUSTRIA.** No credit. No tuition. \$2,400 (approximate) special fee (includes all transportation, all lodging, some meals, 5 concert tickets, one pre-trip lecture). Total \$2,400.

A trip to charm the ear, dazzle the eye, warm the heart, and delight the palate in the world that inspired Mozart, Haydn, Beethoven, Schubert, Strauss, Brahms, Bruckner, and Mahler. It features concerts in a variety of locations such as the lovely floating theatre on Lake Constance at Bregenz (where Switzerland, Austria, and Germany meet), to the Salzburg castle, courtyards, and concert halls. The musical fare is varied, too, from Alpine horns to chamber concerts, opera, and symphonies. Memorable visits to galleries, abbeys, chapels, and palaces are included. In addition to cultural pursuits, fine Rhine wines, Hotel Sacher Tortes, and great German cooking will "round out" our experience. *Gluckliche Reise! (Have a fine journey!)* (Limited to 25)

Summer Spec Term Sec 1 July 13-27, 1985, Byrne

(Richard Byrne, group leader, assistant professor in the General College, is the director of music at the Cathedral of St. Paul)

Read about abbreviations, symbols, and maps on page 60.

Courses and sections in red have limits on enrollment. See page 20.

new

new

noncredit courses

- ★IC 0931 **A HISTORICAL SAMPLER OF BRITAIN.** No credit. No tuition. \$2,300 (approximate) special fee (includes all transportation, all lodging [double occupancy], entrance fees, one pre-trip lecture). Total \$2,300.

new

Too often visitors to Britain content themselves with a few days in London. Escape from London and discover the rest of British history (including the Celtic past), from Roman times to the present, with a friendly historian to answer your questions. Discover the real King Arthur behind the legend. In Welsh-speaking north Wales visit the awesome 13th-century castle built by Edward I at Harlech to subdue the Welsh, the never-never land village of Portmerion (location for "The Prisoner" TV series), and a working narrow-gauge steam railway winding up into the mist-covered mountains of Snowdonia. In Scotland see Hadrian's Wall built by the Roman legions to hold the Picts at bay, elegant Edinburgh with its crooked medieval main street, and the Sir Walter Scott country. In England stop in half-timbered Shrewsbury for an excursion to the nearby excavated vast Roman town of Viriconium. (Limited to 15)

Spring Spec Term Sec 1 **June 15-30**, Suppe

(Frederick Suppe, group leader, lived in Wales for two years and speaks Welsh. Specializing in medieval and Celtic history, he teaches courses in the History Department on English, Welsh, Scottish, and Irish history. He has lectured frequently on King Arthur and other Celtic topics)

- ★IC 0932 **PHOTOGRAPHY AND NATURAL HISTORY IN FLORIDA.** No credit. No tuition. \$850 (approximate) special fee (includes surface transportation in Florida, 6 nights lodging [double occupancy] entrance fees, one pre-trip lecture). Total \$850.

new

In early spring southern Florida delights the nature photographer. Herons and ibis are nesting, orchids and other tropical flowers bloom, and reptiles and amphibians become active. Nights are still cool and insects are not a problem. We will explore and photograph in a variety of habitats from pine woods to swamps and dune-covered beaches to mahogany hummocks. In addition to lesser-known areas, we will visit Anhinga Trail and Cape Sable in Everglades National Park, the Audubon Society's famous Corkscrew Swamp, and Sanibel Island. This trip is for naturalist-photographers who are as interested in learning about their subjects as they are in photographing them. There will be opportunities for participants to photograph in smaller groups or alone if they wish. Course includes two workshops on close-up photography and artistic composition. (Limited to 14)

Spring Spec Term Sec 1 **March 23-31**, Edinger

(Bruce Edinger, group leader, is a graduate student in Ecology and Behavioral Biology. He is vice president and program chair of Minnesota Nature Photography Club and has published and exhibited his photographs)

- ★IC 0934 **WINTER PHOTOGRAPHY ON THE NORTH SHORE.** No credit. No tuition. \$99 (approximate) special fee (includes two nights lodging [double occupancy], 4 meals, and one pre-trip lecture). Total \$99.

new

Few places on earth offer the variety of spectacular scenery that is found on Minnesota's north shore. Learn the techniques of winter photography in this spectacular setting from a veteran nature photographer and instructor. While there, you will stay in one of the finest winter resorts and cross country ski facilities in the Midwest, Cascade Lodge. Cross country skiing is one of the exciting options available, but it isn't required for participation in the workshop. Ample photographic opportunities are located with a short hike or drive from the lodge. Before you leave for the north shore, you will have an orientation session and lecture covering basic

(continued next page)

Read about abbreviations, symbols, and maps on page 60.
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noncredit courses

winter photography techniques. At Cascade spend mornings in photography workshop sessions. Afternoons are free for cross country skiing and personal photography. In the evening you will have the opportunity to view inspirational slide/tape presentations on the work of noted photographers and have personal critiques of your work. Two weeks following the field experience, there will be a presentation and critique session on campus where you will have the opportunity to share your work with other participants. (Limited to 20)

Winter Spec Term Sec 1 March 15-17

(Don Breneman, group leader and veteran nature photographer, is an associate professor in the College of Agriculture)

- ★**IC 0935 WINTER WILDLIFE: A WEEKEND IN THE NORTH WOODS.** No credit. No tuition. \$99 (approximate) special fee (includes two nights lodging [double occupancy], 4 meals, and one pre-trip lecture). Total \$99.

This weekend trip to Cascade Lodge along Minnesota's north shore provides participants with a chance to enjoy wildlife and some recreation before the winter season is gone. Activities include bird-watching, learning about plants as they are preparing for spring, and reading animal signs. Time also will be available for skiing or snowshoeing, or for just relaxing in a beautiful and peaceful north woods setting. (Limited to 20)

new

Winter Spec Term Sec 1 March 15-17

(The trip leader is Jake Miller, who has taught Winter Ecology in Minnesota for several years and is a graduate student in Ecology and Behavioral Biology)

- ★**IC 0936 ROCKY MOUNTAIN WILDFLOWER PHOTOGRAPHY WORKSHOP.** No credit. No tuition. \$675 special fee. Total \$675.

Learn the art of wildflower and landscape color photography amid the spectacular scenery of the Spanish Peaks Wilderness Area and the Gallatin river valley in Big Sky, Mont. This unique one-week workshop features seminars and discussions on outdoor photography technique, field trips accompanied by the instructor, critiques, and interaction with other photographers. Open to photographers of all skill levels. Enrollment is limited to allow personal instruction on individual problems. You will stay at Lone Mountain Ranch, one of the finest guest ranches of its type in the country. Your beautifully maintained log cabin with fireplace and all modern facilities is close to a mountain stream where countless photographic opportunities lie outside your door. (The ranch is widely recognized for its outstanding family style dining.) Only additional cost is film, and you must have a 35 mm camera. The workshop is intensive, but you will have time for personal activities and guided field trips into remote back country areas plus an optional field trip to Yellowstone National Park less than an hour away. The ranch provides ample activities for family members not participating in the workshop, including horseback riding, trout fishing, nature walks (accompanied by a naturalist)—including bird watching, tree and wildflower identification, geology, and Indian trails. Golf and tennis nearby. To assure accommodations, reservations must be made early. Cost includes all workshop instruction, lodging, food, and **one orientation session on campus May 2.** (Ask about group rates for family members not attending workshop. Limited enrollment)

new

Summer Spec Term Sec 1 June 9-16, 1985, Breneman

(Don Breneman, veteran nature photographer, is an associate professor in the College of Agriculture and is the workshop instructor)

Read about abbreviations, symbols, and maps on page 60.
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noncredit courses

Professional Improvement Courses and Seminars

Continuing Management Education

Courses and seminars offered through Continuing Management Education are designed for people who want and need high-quality, convenient, cost-effective opportunities for management development. Most of the programs are held in the comfortable surroundings of the Earle Brown Continuing Education Center on the St. Paul campus (ten minutes from either downtown); parking and access to the programs are easy.

The offerings are especially designed to be *timely, flexible, and practical*. They are timely in that the topics reflect the latest and best information on important management issues and skills. They are flexible because many are scheduled both during the day and in the evening for your convenience. And, they are practical since each instructor specifically blends the best in theory with the latest in management practices.

Whether you are considering a management career, are newly assigned to a management position, or are an experienced professional, Continuing Management Education can provide you with the means for personal growth that also pays off in improved organizational performance.

Targeted Programs

Targeted programs designed by Continuing Management Education are also available for a wide variety of management professionals, including accountants, customer service representatives, sales representatives and managers, purchasing managers, secretaries, manufacturers, retailers, advertising and public relations professionals, MIS professionals, and owners and managers of small companies.

For further information, or to place your name on our mailing list, call 376-7436.

Registration

Register for Professional Improvement Courses and Seminars through Continuing Management Education, 338 Nolte Center, 315 Pillsbury Dr. S.E., University of Minnesota, Minneapolis, MN 55455.

Registration forms and additional information about specific offerings may be obtained by calling 373-9992, or by writing to the address above.

Leadership and Management (begins page 505)

The Interview Connection: For the Person Hiring and the Person Wanting to be Hired

The Minnesota Management Audit Workshop

Leadership: Building on Your Strengths

The Art of Self Leadership: Strategies for Personal Effectiveness in Your Life and Work

Basic Supervision

Management Skills

The Innovative Manager: How to Implement Forward Thinking for You and Your Organization

How Successful Women Manage

Women Supervising Women

Women Supervising Men

Effective Delegation: The Art of Holding On While You Let Go

The Manager as Coach: Correcting Performance Problems

Time Management for Managers

Read about abbreviations, symbols, and maps on page 60.

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noncredit courses

Practical Negotiation Skills
Dealing with Nonproductive Employees
Assertiveness Training for Managers
Assertiveness Training for Women in Leadership Positions

Communication Skills (begins page 510)
Improving Communication Skills in the Workplace
Overcoming Fear of Speaking
Becoming an Effective Listener
How to Write for the World of Work
Telephone Techniques and Dealing with the Public
Video Scriptwriting for Business Communications and Training

Information Systems: Computers and Management (begins page 512)
Computer Basics for Business and Management
Introduction to Microcomputers: Hardware and Software
Programming in BASIC and Principles of Data Processing

Accounting and Finance (begins page 513)
Fundamentals of Finance and Accounting for Nonfinancial Managers
Budgeting by Department and Functional Area
Reading and Interpreting Financial Statement
Planning Cash Flow

Marketing/Advertising/Public Relations (begins page 514)
Fundamentals of Modern Marketing
Fundamentals of Direct Marketing
Designing Questionnaires and Surveys
Advertising: An Overview for the Non-Advertising Professional
Introduction to Advertising Design and Production
Advertising: Prescription for Slumping Sales
Public Relations for the Non-PR Professional
For Non-Public Relations Professionals: How to Use Newspapers, Television, and Radio to Promote Your Organization

Service Organizations (begins page 516)
How to Budget in a Service Organization
Marketing for Service Organizations
Long-Range Planning for Service Organizations

Personal Development and Career Exploration (begins page 517)
Career Exploration Workshops
Assertiveness Training for Men and Women
How to Build Memory Skills
Stress Management and Productivity
Personal Financial Management

Leadership and Management

THE INTERVIEW CONNECTION: FOR THE PERSON HIRING AND THE PERSON WANTING TO BE HIRED. \$135.

Interviewing (selection) mistakes are costly for everyone involved. Too often, employers find out that the person on payroll is not the person they thought they had hired. And employees may find that their "dream job" is just another organizational dead end. This unique seminar addresses the needs of both parties involved in making the job connection—the interviewer and interviewee. For the interviewer, topics include (1) how to deal with the "professional

noncredit courses

applicant," (2) what to look for in resumes and credentials, (3) the interview—how to go beyond rehearsed questions and responses, and (4) how to really check references. For the candidate, topics include (1) how to interview your potential boss, (2) how to get what you want out of the interview, and (3) how to obtain a job offer. Participants learn to use tools such as active listening and probing questions, all introduced as a technique to practice the interview process. Limited enrollment. Meets on the St. Paul campus, Tuesdays and Thursday, 6-9 p.m., Oct. 9, 11, 16, 1984, for 3 meetings; or Tuesdays and Thursday, 6-9 p.m., Apr. 9, 11, 16, 1985, for 3 meetings. Call 373-9992 for registration forms and information.

(Instructor is Robert Gillman, a personnel consultant with Andcor Companies, Inc., who recruits and places candidates in middle- and upper-management positions in finance, accounting, and human resources)

THE MINNESOTA MANAGEMENT AUDIT WORKSHOP. \$195.

More than ever before, managers in the 1980s are evaluating their skills and constructing plans to improve those skills through continuing education seminars and courses. As a manager or supervisor, your success will be determined by the accuracy of your initial self-assessment. The Minnesota Management Audit Workshop is a new and unique workshop which uses the nationally known Leadership Development Profile[®] to first collect and provide managers with accurate and believable feedback from one's boss, staff, and peers on leadership style and managerial practices. Then, the workshop provides a supportive environment to evaluate the data and develop a personal plan for improvement. (All data collected become the sole property of the participating manager.) At the pre-meeting, 5:30-6:30 p.m., on Wed., Oct. 2, 1984, or Tues., Feb. 12, 1985, managers are given questionnaires to distribute to their boss, staff, and organizational peers. The review, evaluation, and formulation of a personal performance improvement plan will take place at the day-long seminar, 8:30 a.m.-4:30 p.m., Wed., Nov. 14, 1984; or Wed., Mar. 27, 1985. Lunch and materials are included. Limited enrollment. Meets on the St. Paul campus. Call 373-9992 for registration forms and information.

(Instructor is Chuck Hickok, president of Managerial Awareness. He has conducted training sessions for managers and supervisors in industry and government)

LEADERSHIP: BUILDING ON YOUR STRENGTHS. \$145.

Have you ever wondered about the difference between a manager and a leader? This seminar gives some answers—and shows participants how to make better use of their leadership qualities. Participants identify, compare, and discuss the various points of view that affect leadership. Just as each person has his or her own personality, each leader has his or her own most effective leadership style. Successful leaders know their particular styles and the best ways to use them. Participants start with two self-assessment forms that are in current use in many organizations nationwide and practice such skills as people reading, team building, motivating, and interpersonal negotiating. Limited enrollment. Meets on the St. Paul campus, Thursday, 8:30 a.m.-4:30 p.m., Jan. 10, 1985, for 1 meeting (includes luncheon); or Thursday, 8:30 a.m.-4:30 p.m., June 6, 1985, for 1 meeting (includes luncheon). Call 373-9992 for registration forms and information.

(Instructors are Joseph Baker, vice president of operations at Performax Systems International, Inc., and Dr. Leland Renz, manager of seminars and learning systems, also at that company)

THE ART OF SELF LEADERSHIP: STRATEGIES FOR PERSONAL EFFECTIVENESS IN YOUR LIFE AND WORK. \$145.

Too often, managers focus on the ways to influence others and neglect the more fundamental issue of how they, and their employees, can better lead themselves toward their personal goals and dreams. This is not a seminar on leadership of others. Instead, it is about something more basic and more powerful—self-leadership. It should be attended by anyone who wants his/her work force to participate effectively and contribute to organizational performance.

(continued next page)

noncredit courses

Based on the book of the same title, this seminar will help you recognize your own self-leadership patterns—and how to improve them. Using lecture, self-assessment questionnaires, check lists, and exercises, the seminar will help you understand the all-important role you play in determining the external influences that will be relevant to you—and you'll learn how to redesign your work and your world so that they will bring out your best qualities and your fullest potential. Limited enrollment. *Meets on the St. Paul campus, Thursday, 8:30 a.m.-4:30 p.m., Jan. 24, 1985, for 1 meeting; or on Thursday, 8:30 a.m.-4:30 p.m., Apr. 25, 1985, for 1 meeting. Call 373-9992 for registration forms and information.*

(Instructor is Dr. Charles Manz, an assistant professor of management in the Department of Strategic Management and Organization at the University of Minnesota. He is the author of The Art of Self-Leadership)

BASIC SUPERVISION. \$150.

The development of professional supervisory skills is critical for one's personal advancement, and future managerial success. Yet it is often overlooked, or left to "on-the-job" learning. This course is designed for people who have little formal supervisory training and have been promoted to a supervisory position, or for experienced supervisors who need to learn or review their skills in a more formal educational manner. Each session focuses on a specific subject. Topics covered include the role of the supervisor; employee discipline; hiring and training; organizing yourself and your time; and people—greatest joy/greatest problem. Concentrates on *practical* supervision techniques rather than on academic theory. Limited enrollment. *Meets on the St. Paul campus, Thursdays, 5:30-8:30, Sept. 27-Oct. 25, 1984, for 5 meetings; or on Thursdays, 5:30-8:30, Mar. 28-Apr. 25, 1985, for 5 meetings. Call 373-9992 for registration forms and information.*

(Instructor is Thomas W. Faranda, president of Faranda and Associates, Inc., management trainers and consultants. He is an adjunct professor in Management at the University)

MANAGEMENT SKILLS. \$150.

A practical look at five of the major skills needed for successful management in any organization, the course provides a thorough and practical treatment of the following critical areas: What managers do—the five functions of management. Leadership. Motivation. Communication. Management decision-making. Each subject is discussed for one meeting. Emphasis is on *practical management skills* and not on academic theory. Designed for supervisors, and middle- and upper-level managers who have not had formal management training. Limited enrollment. *Meets on the St. Paul campus, Thursdays, 5:30-8:30 p.m., Nov. 1-Dec. 6, 1984 (no meeting Nov. 22), for 5 meetings; or Thursdays, 5:30-8:30 p.m., Feb. 7-Mar. 7, 1985, for 5 meetings; or Thursdays, 5:30-8:30 p.m., May 2-30, 1985, for 5 meetings. Call 373-9992 for registration forms and information.*

(Instructor is Thomas W. Faranda. See biography with course above)

THE INNOVATIVE MANAGER: HOW TO IMPLEMENT FORWARD THINKING FOR YOU AND YOUR ORGANIZATION. \$150.

Some organizations seem always to be "one jump ahead," anticipating emerging market trends or designing new products or services and then reaping the rewards that come from being first in the field. Intended especially for the manager/leader who needs to be able to conceptualize and to translate concepts into new practice, this seminar is designed to give you practice in using and applying skills associated with forward or divergent thinking. Participants learn techniques for problem analysis, idea generation, effects estimation, and the fine tuning necessary for gauging whether new ideas, products, or services are truly viable. Operational gaming, team-based exercises, and action labs are utilized. Limited enrollment. *Meets on the St. Paul campus, Wednesday and Thursday, Nov. 6 and 7, 1984, for 2 meetings. Call 373-9992 for registration forms and information.*

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noncredit courses

(Instructor is Ron Klietsch, the Continuing Education and Extension Coordinator of Management Sciences at the University. He has designed and presented customized divergent-thinking models and strategic planning exercises in educational product and consumer product systems)

HOW SUCCESSFUL WOMEN MANAGE. \$145.

This hard-hitting course states flatly that there is no difference between what male and female managers must do to get the job done, but that there is a world of difference in how it must be done in order to get results. Many mini-case studies show how to use proven techniques to open the door to career advancement, job satisfaction, and equal pay. Topics include culture, condition, and the female role; communication skills, including the assertive script; managing vs. doing; special stress management concerns for women; techniques for decision making; leadership and the woman manager; managing change, including measuring innovation and overcoming resistance. Designed for every woman manager or supervisor who wants to be accepted for what she does, not who she is. Limited enrollment. Offered in cooperation with the American Management Associations Extension Institute. Meets on the St. Paul campus, Tuesdays, 7-9 p.m., Oct. 2-Nov. 6, 1984, for 6 meetings; or Tuesdays, 7-9 p.m., Feb. 19-Mar. 26, 1985, for 6 meetings. **Call 373-9992 for registration forms and information.**

(Instructor is Jerie McArthur, who has consulted extensively and taught communication skills for both the public and private sectors. She is a member of the Speech-Communication faculty at the University)

EFFECTIVE DELEGATION: THE ART OF HOLDING ON WHILE YOU LET GO. \$145.

This seminar is for managers or supervisors who want to become more productive by learning to delegate work to their subordinates. Productive managers and supervisors cannot perform all of the work for which they are responsible. The program helps managers and supervisors (1) better understand their leadership roles and the roles of their subordinates, (2) gain insight into what work and responsibilities should be delegated, and (3) understand what control systems can be used to ensure that delegation is done effectively. Special attention is paid to individual delegation problems. Meets on the St. Paul campus, Thursday, 8:30 a.m.-4:30 p.m., Nov. 8, 1984, for 1 meeting (includes luncheon); or Thursday, 8:30 a.m.-4:30 p.m., Apr. 11, 1985, for 1 meeting (includes luncheon). **Call 373-9992 for registration forms and information.**

(Instructor is Robert L. Fjerstad, founder and principal of Human Relations Consultants of Minneapolis, who has many years experience as a dynamic and down-to-earth seminar leader throughout the U.S. He has many years experience in corporate organizations including manager of the personnel department at Northern States Power, Minneapolis)

WOMEN SUPERVISING WOMEN. \$45.

For women who are (or may be) supervising women, as well as for women who work for a woman supervisor, this workshop explores the unique problems that may arise in situations where women supervise women. Issues that are discussed include understanding the impact of guilt, jealousy, and dependency; resolving conflicts; delegating effectively; learning to recognize the difference between operating and managing; and handling issues of power and authority. Limited enrollment. Meets on the St. Paul campus, Saturday, 8:30 a.m.-12 noon, Oct. 27, 1984, for 1 meeting; or Saturday, 8:30 a.m.-12 noon, Apr. 20, 1985, for 1 meeting. **Call 373-9992 for registration forms and information.**

(Instructor is Jerie McArthur, who has consulted extensively and taught communication skills for both the public and private sector. She is a member of the Speech-Communication faculty at the University)

noncredit courses

WOMEN SUPERVISING MEN. \$45.

For women who are (or may be) supervising men, as well as for women who work for a male supervisor, this workshop explores the unique problems that may arise in situations where women supervise men. Addresses the issues of differences of male and female socialization and how this affects the workplace. Discusses differences of language, style; issues of control, credibility, and power; and the trust factor. Limited enrollment. *Meets on the St. Paul campus, Saturday, 8:30 a.m.-12 noon, Nov. 3, 1984, for 1 meeting; or Saturday, 8:30 a.m.-12 noon, Apr. 27, 1985, for 1 meeting. Call 373-9992 for registration forms and information.*

(Instructor is Jerie McArthur. See biography with course above)

THE MANAGER AS COACH: CORRECTING PERFORMANCE PROBLEMS. \$145.

Successful managers and supervisors have the skills to confront, discuss, and improve the work of individual employees who have unacceptable work performance records. This seminar will help participants learn how to "coach" poor workers into high quality, productive employees. Topics include: what coaching is and is not, coaching options available, questioning and listening techniques, and the use of feedback after a coaching discussion. This program is appropriate for managers in any organization, profit or nonprofit, where individual performance of subordinates is critical to overall efficiency. Limited enrollment. *Meets on the St. Paul campus, Thursday, 8:30 a.m.-4:30 p.m., Oct. 11, 1984, for 1 meeting (includes luncheon); or Tuesday, 8:30 a.m.-4:30 p.m., Feb. 12, 1985, for 1 meeting (includes luncheon). Call 373-9992 for registration forms and information.*

(Instructor is Chuck Hickok, president, Managerial Awareness, Inc.)

TIME MANAGEMENT FOR MANAGERS. \$145.

For managers, supervisors, and other business professionals who never seem to have the time to get the job done, this seminar shows you how to develop a simple but effective personal system of time management. Participants will be able to work in small groups to practice unique time management exercises, and will learn how to plan/organize/control daily and weekly work plans; identify and establish priority systems for different work activities; block out time to work on high priority projects; minimize interruptions; expedite paperwork; and eliminate procrastination. Limited enrollment. *Meets on the St. Paul campus, Friday, 8:30 a.m.-4:30 p.m., Oct. 26, 1984, for 1 meeting (includes luncheon); or Friday, 8:30 a.m.-4:30 p.m., Apr. 26, 1985, for 1 meeting (includes luncheon). Call 373-9992 for registration forms and information.*

(Instructor is Patrick Coleman, president of The Training Company, Inc., Minneapolis)

PRACTICAL NEGOTIATION SKILLS. \$145.

Negotiating represents the current "state-of-the-art" in managing, selling, and the general conduct of modern business affairs. Knowing how to negotiate successfully represents an important but too often overlooked competitive business advantage. This course will help you use the negotiating process more effectively. Principles introduced and discussed are founded in the labor/management relationship and collective bargaining process. In this practical program, participants learn what negotiating is, discuss the negotiating ritual, characteristics of effective negotiations, negotiating mistakes, and alternatives when an impasse arises. Limited enrollment. *Meets on the St. Paul campus, Wednesdays, 6-9 p.m., Jan. 30-Feb. 20, 1985, for 4 meetings. Call 373-9992 for registration forms and information.*

(Instructor is William Bednarczyk, a management consultant specializing in employee/labor relations. He was formerly director of employee/labor relations with the Toro Company)

DEALING WITH NONPRODUCTIVE EMPLOYEES. \$145.

This one-day seminar for supervisors or managers, deals with the dilemma of what to do with nonproductive employees who don't perform up to expectations, and who create problems

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noncredit courses

for the manager, other employees, and for themselves. Topics include specific "how to's," "do's and don'ts," for taking action. Special emphases include guidelines on determining if you have a problem, and when and how to do something about it. Participants learn how to coach and how to develop an overall strategy/action plan that is ethical, legal, and practical. Limited enrollment. Meets on the St. Paul campus Wednesday, 8:30 a.m.-4:30 p.m., Mar. 13, 1985, for 1 meeting. Call 373-9992 for registration forms and information.

(Instructor is Barbara A. Hanley, principal of Hanley Associates Consultants, who has presented this course to over 50 companies and public seminar groups. She has an M.A. degree in industrial relations, is an experienced line manager, and has conducted management training programs for over 16,000 participants nationwide)

ASSERTIVENESS TRAINING FOR MANAGERS. \$145.

An effective assertive manager must understand appropriate communications between people in the business setting. The goal of assertiveness training is self-control and good interpersonal relations on the job. It can smooth contacts between supervisors and subordinates. Attendance at this seminar will help the participant discover that assertiveness means being direct, open, and honest—with respect for self and for all other people at all levels of the organization. Participants will learn how to identify the ineffective manager and achieve the assertiveness skills needed to become a fully effective manager. Limited enrollment. Meets on the St. Paul campus, Wednesday, 8:30 a.m.-4:30 p.m., Oct. 24, 1984, for 1 meeting (includes luncheon). Call 373-9992 for registration forms and information.

(Instructors are Dorothy McGlauchlin, president of Candor Associates, Inc., and David Dotlich, corporate manager of Human Resource Development at Honeywell, Inc.)

ASSERTIVENESS TRAINING FOR WOMEN IN LEADERSHIP POSITIONS. \$145.

Uses a combination of lecture, self-assessment inventories, and simulation exercises to help women strengthen their leadership skills and image. Assertive behavior is the basis by which women can reduce their fears and increase their confidence to handle situations comfortably and well. Participants learn the eight phases of creative leadership; learn about assertion as a behavioral style; examine the importance of assertiveness in developing and maintaining leadership; learn effective strategies for dealing with difficult situations; learn to set and assertively pursue an important goal. Meets on the St. Paul campus, Friday, 8:30 a.m.-4:30 p.m., Feb. 1, 1985, for 1 meeting. Call 373-9992 for registration forms and information.

(Instructor is Dorothy Loeffler, Ph.D., a licensed consulting psychologist, president of Psyche, Inc., and professor in Educational Psychology and Women's Studies at the University)

Communication Skills

IMPROVING COMMUNICATION SKILLS IN THE WORKPLACE. \$150.

Managers and supervisors are constantly involved in communications that affect both the performance and feelings of personal well-being of their staff and themselves. Stresses win-win strategies for the effective management of one-on-one and group interactions. Participants learn principles and practice techniques for providing and receiving support and criticism; conducting hiring selection, and performance appraisal interviews; and managing conflict situations. Most important, the course aims to increase your ability to assess the dynamics of an interaction, and your ability to effectively manage that event. Limited enrollment. Meets on the Minneapolis campus, Tuesdays, 6:30-9:30 p.m., Oct. 9-Nov. 13, 1984, for 6 meetings; or Tuesdays, 6:30-9:30 p.m., Apr. 9-May 14, for 6 meetings. Call 373-9992 for registration forms and information.

(Instructor is Mary Beth Percy, a management training specialist and assistant manager of organization and personnel development at the University of Minnesota hospitals and clinics)

noncredit courses

OVERCOMING FEAR OF SPEAKING. \$145.

Designed for people at all management levels who experience nervousness and anxiety when faced with speaking before a group whether giving reports, conducting meetings, or making presentations as part of their job or outside interests. Participants learn how to prepare and give presentations. Strategies are suggested to help participants build self confidence and use nervous energy in a positive way to achieve desired goals. Limited enrollment. Meets on the Minneapolis campus, Mondays, 6:30-8:30 p.m., Oct. 1-Nov. 5, for 6 meetings; or Wednesdays, 6:30-8:30 p.m., Feb. 13-Mar. 20, for 6 meetings. Call 373-9992 for registration forms and information.

(Instructor is Dawn Ohlendorf Braithwaite, a teaching associate in Speech-Communication at the University, who has conducted workshops in all types of communication for various businesses)

BECOMING AN EFFECTIVE LISTENER. \$145.

"That wasn't what I heard at all. . . He/She just doesn't seem to hear what I'm saying. . ." If you have made these statements, or if you think you are the person being described, you may need practice in developing your listening skills. Introduces the basic techniques for improvement of listening as a skill of communication. Deals with the attitudes, behaviors, and habits of listening. Designed to sharpen the ability to concentrate on a message in order to increase accuracy and retrievability of information. Also designed for newly appointed or aspiring supervisors, managers, and other mid- or entry-level people who need to listen more effectively on their jobs. Limited enrollment. Meets on the St. Paul campus, Monday, 8:30 a.m.-4:30 p.m., Jan. 14, 1985, for 1 meeting; or Mondays, 6-9 p.m., Apr. 1-22, for 4 meetings. Call 373-9992 for registration forms and information.

(Instructor is James Connolly, professor in Rhetoric at the University. He has 20 years experience teaching and consulting)

HOW TO WRITE FOR THE WORLD OF WORK. \$145.

Generate successful business and technical reports, letters, and memos by building your understanding of the writing process. You learn to write with a persuasive style by focusing on the communication triangle: *information, audience, and purpose*. Organization, format, and editing are discussed, and examples of standard letters and reports are given. While some basic rules of grammar and usage may be covered, this session is not a review of traditional English composition. Teaching methods include lectures, discussion, and workshops. Managers, assistants, technicians, and professionals—anyone who must write correspondence and reports—should find this seminar useful. Limited enrollment. Meets on the St. Paul campus, Friday, 8:30 a.m.-4:30 p.m., Oct. 26, 1984, for 1 meeting (includes luncheon); or Mondays, 6:30-10 p.m., Jan. 14, 21, 1985, for 2 meetings; or Wednesday, 8:30 a.m.-4:30 p.m., Apr. 24, 1985, for 1 meeting (includes luncheon). Call 373-9992 for registration forms and information.

(Instructor is Thomas E. Pearsall, professor and head in the Department of Rhetoric at the University of Minnesota)

TELEPHONE TECHNIQUES AND DEALING WITH THE PUBLIC. \$135.

Improve your telephone and public contact skills. Designed for beginning receptionists, secretaries, and others who want to create a positive first impression meeting their company's clients, patients, or customers face-to-face and on the telephone. Major emphasis is on developing individual style through topics on proper phrasing, dealing with difficult people, and the efficient use of basic telephone equipment. You will learn how to create a positive first impression, how to establish trust and rapport, and how to handle customer complaints. A multi-media approach of video taping, lecture, discussion, and hands-on techniques. Limited enrollment. Meets on the St. Paul campus, Mondays, 6-8:30 p.m., Oct. 22-Nov. 19, for 5 meetings. Call 373-9992 for registration forms and information.

(Instructor is Cindy Jepson, who worked for Northwestern Bell for nine years as a service advisor. She prepared a training package for customer instruction that has been adapted for use by AT&T and Northwestern Bell)

noncredit courses

VIDEO SCRIPTWRITING FOR BUSINESS COMMUNICATIONS AND TRAINING. \$150.

Provides students with the tools and knowledge to write scripts for business communication and training video tapes. Topics covered include writing for the ear and eye, video technologies and costs, prescribing research, script treatment, script styles, the review process, and working with video producers. Students are expected to complete a writing assignment for each session. Limited enrollment. Offered in cooperation with University Community Video. *Meets on the Minneapolis campus, Thursdays, 7-9 p.m., Apr. 4-May 23, 1985, for 8 meetings. Call 373-9992 for registration forms and information.*

(Instructor is Paul D. Burtness, an independent professional scriptwriter working in the field of business communications and training. He writes scripts for all formats, including slide shows, multi-image, film, video tape, and video disc)

Information Systems: Computers and Data Processing

COMPUTER BASICS FOR BUSINESS AND MANAGEMENT. \$150.

Designed for the non-data processing manager, executive, or decision maker who recognizes the advantages of incorporating computers into the decision-making process, and who requires a knowledge of computers from a managerial and functional point of view. This program is an adaptation of the most popular seminar on computer basics offered in the Twin Cities. Provides participants with an understanding of the decision-making process; what computers are and what they can do; computer terms, technology, and data processing principles; and how to introduce computers into the decision-making process. Topics include computer hardware and software, problem solving, system development and design, and the roles and relationships of people in computer systems. Limited enrollment. *Meets on the St. Paul campus, Wednesdays, 6-9 p.m., Oct. 3-31, 1984, for 5 meetings; on Mondays, 6-9 p.m., Apr. 15-May 13, 1985, for 5 meetings. Call 373-9992 for registration forms and information.*

(Instructors are John Knauff, president of a management consulting firm, Knauff and Associates; he also teaches in the Department of Management Sciences at the University. Tom Ressler is a professor at the College of St. Thomas, and has extensive experience in the application of computer science for management decision making)

INTRODUCTION TO MICROCOMPUTERS: HARDWARE AND SOFTWARE. \$150.

Microcomputers are becoming an integrated productivity resource for the manager and support staff in the office environment. Course is designed to acquaint participants with microcomputer hardware and general utility software packages. Electronic spread sheet, word processing, and data base concepts are taught through laboratory activities during three of the class sessions. In addition, course includes a discussion of techniques for analyzing microcomputer software to facilitate selection and acquisition decision-making processes. Limited enrollment. *Meets on the St. Paul campus, Thursdays, 6-9 p.m., Feb. 7-Mar. 7, 1985, for 5 meetings; or Wednesdays, 6-9 p.m., May 1-29, 1985, for 5 meetings. (The three middle meetings will be held in the Roseville area—location to be announced.) Call 373-9992 for registration forms and information.*

(Instructor is James Sydow, Director of Micro Systems for TIES, a regional computer center for the Minnesota School Districts)

PROGRAMMING IN BASIC AND PRINCIPLES OF DATA PROCESSING. \$150.

An introduction to information processing concepts and terminology; computer systems including hardware, software, and applications; and computer methods including the analysis and design of programs and use of a programming language. Students write, debug, and run five or six programs using the BASIC language on the University computer terminals. Course designed (1) for people considering the field of data processing and those who wish to

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new

noncredit courses

assess their aptitude for the work and learn about career opportunities in data processing; (2) for people desiring to learn how to write programs; and (3) for people who wish to learn how to program in the BASIC language. Limited enrollment. *Meets on the Minneapolis campus, Thursdays, 6-8:30 p.m., Oct. 25-Dec. 13, 1984, for 7 meetings; or Thursdays, 6-8:30 p.m., Mar. 14-Apr. 25, 1985, for 7 meetings. Call 373-9992 for registration forms and information.*

(Instructor is Bernice Folz, an associate professor and chair of quantitative methods and computer science at the College of St. Thomas. She has worked in business as a systems engineer and a supervisor of software design and maintenance)

Accounting and Finance

FUNDAMENTALS OF FINANCE AND ACCOUNTING FOR NONFINANCIAL MANAGERS. \$160.

A non-technical approach to accounting for persons in general management, marketing, manufacturing, personnel, and research and development. The basics of accounting are fully explained, but stress is placed on the understanding of the applications of accounting in the normal operations of a business. Successful completion should allow a person to better understand financial statements and their effect on individual departments; make financial decisions more confidently; better use financial reports and analyses to develop and maintain a management plan; better their ability to hold their own in financial discussions; and more accurately evaluate a company's financial condition. Although the course is designed specifically for people working in the private sector, most of the topics have a direct application to nonprofit organizations as well. Limited enrollment. Offered in cooperation with the American Management Associations Extension Institute. *Meets on the St. Paul campus, Tuesdays, 6-9:30 p.m., Oct. 2-30, 1984, for 5 meetings; or Tuesdays, 6-9:30 p.m., Mar. 26-Apr. 23, 1985, for 5 meetings. Call 373-9992 for registration forms and information.*

(Instructor is David Emerson, C.P.A., M.B.A., a professor of accounting at the College of St. Catherine. He was formerly Dean of Instruction for Santa Barbara City College, Cal.)

BUDGETING BY DEPARTMENT AND FUNCTIONAL AREA. \$160.

A practical guide to budgeting by department. This "how to" course is designed to allow participants to build a budget starting from the smallest department through a complete functional area (sales, manufacturing, general administrative), to a corporate-wide budget. The course includes step-by-step procedures needed to create a budget, and many forms to provide important procedures and guidance in the budget building process. Designed for all managers responsible for department, functional, or corporate budgets. Although the course is designed specifically for persons working in the private sector, most of the topics, techniques, and forms have a direct application to nonprofit organizations as well. Limited enrollment. Offered in cooperation with the American Management Associations Extension Institute. *Meets on the St. Paul campus, Thursdays, 6-9:30 p.m., Jan. 31-Feb. 28, 1985, for 5 meetings. Call 373-9992 for registration forms and information.*

(Instructor is David Emerson [see biography with course above])

READING AND INTERPRETING FINANCIAL STATEMENTS. \$160.

A practical guide to understanding financial statement. The course includes the three critical tools to financial analysis—the comparison of statements by periods, the use of horizontal and vertical percentage analysis, and the computation of ratio and ratio analysis. Provides a working knowledge of the techniques used by business professionals to assess performance and future potential. Topics include financial statement analysis, a review of working capital and its use, financing assets through leverage, analysis of income statements and operational results. Designed for both financial and nonfinancial managers. Limited enrollment. Offered in cooperation with the American Management Associations Extension Institute. *Meets on the*

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noncredit courses

St. Paul campus, Tuesdays, 6-9:30 p.m., Nov. 6-Dec. 11, 1984 (no meeting Nov. 27), for 5 meetings. **Call 373-9992 for registration forms and information.**

(Instructor is David Emerson [see biography with course above])

PLANNING CASH FLOW. \$160.

Provides an introductory but thorough understanding of cash flow management. Topics include the planning and management of cash, short term securities, accounts receivable, inventory, and short term and intermediate term debt. Designed for both financial and nonfinancial managers to provide a working knowledge of cash flow management to predict the timing of cash flows, how to turn inventory and receivables into cash, and how to manage payables to your benefit. In summary, how to manage money more efficiently to increase the operational effectiveness of the firm. Limited enrollment. Offered in cooperation with the American Management Associations Extension Institute. *Meets on the St. Paul campus, Tuesdays, 6-9:30 p.m., Jan. 29-Feb. 26, 1985, for 5 meetings. Call 373-9992 for registration forms and information.*

(Instructor is David Dahlberg, C.P.A., a former auditor and controller in the private sector, who is currently a professor in accounting and finance at the College of St. Catherine)

Marketing/Advertising/Public Relations

FUNDAMENTALS OF MODERN MARKETING. \$140.

Provides a thorough orientation to the marketing function for the non-marketing manager. Participants learn how to determine and integrate market characteristics in order to devise an overall marketing strategy, and to develop the skills needed to analyze and evaluate marketing problems. Topics include how to identify and analyze target markets; understanding consumer behavior; how to communicate attributes (tangible and intangible) of a product; and how to utilize promotion effectively. The four principles of marketing—product, pricing, promotion, and distribution—are explored as they relate to actual examples provided in class. Content is presented through lecture, and current case study analysis and discussion. Designed for those who need to understand the role of marketing within the business environment. Limited enrollment. Offered in cooperation with the American Management Associations Extension Institute. *Meets on the St. Paul campus, Tuesdays, 7-9 p.m., Oct. 2-30, 1984, for 5 meetings. Call 373-9992 for registration forms and information.*

(Instructor is Shari Peterson, an assistant professor in marketing, General College, at the University)

FUNDAMENTALS OF DIRECT MARKETING. \$150.

Introduction to the basic techniques of direct marketing with emphasis on direct mail, telemarketing, broadcast and print media. Covers what it is and what it is not. Includes objectives, mailing lists, copy, layout and production, formats, postal regulations, measurability, and cost analysis. Designed for those wanting to use direct marketing for the first time as well as for practitioners who want a refresher in basic techniques. Professionals from the Twin Cities direct marketing field focus on their areas of specialization in co-teaching the course. Limited enrollment. Offered in cooperation with the American Management Associations Extension Institute. *Meets on the Minneapolis campus, Tuesdays, 6-8:30 p.m., Oct. 4-Nov. 15, 1984, for 7 meetings; or meets Thursdays, 6-8:30, Apr. 4-May 16, 1985, for 7 meetings. Call 373-9992 for registration forms and information.*

(Coordinator is Beverly Sinniger, Assistant Director for Promotion and Publicity, Extension Classes, at the University)

noncredit courses

DESIGNING QUESTIONNAIRES AND SURVEYS. \$135.

Helps you design reliable and valid questionnaires. Questionnaires and surveys are often used in work setting to assess employee needs, develop an effective plan for solving an organizational problem, or establish a base for future planning. Topics include the strengths and weaknesses of questionnaires; what constitutes a good questionnaire; how to write effective questions and prepare an efficient format; the importance of setting up response alternatives; how to conduct the study; and preparing the responses for computer analysis. Designed for people in marketing; those doing needs assessments or evaluations of programs, or those who are involved in volunteer work and are in need of reliable data. Limited enrollment. *Meets on the St. Paul campus, Wednesdays, 6-8 p.m., Jan. 23-Feb. 13, 1985, for 4 meetings. Call 373-9992 for registration forms and information.*

(Instructor is Darwin Hendel, a consulting psychologist and a research associate at the University)

ADVERTISING: AN OVERVIEW FOR THE NON-ADVERTISING PROFESSIONAL. \$150.

Designed for managers and professionals who need to know what role advertising plays in today's business and what basic processes are involved in building a successful ad campaign. To illustrate points, participants get a behind-the-scenes look at famous advertising campaigns and become familiar with the different types of advertising; the relationship between marketing and advertising; the difference between advertising and public relations; methods of advertising budgeting; planning a campaign; defining a target audience; measuring advertising performance; and the advantages and disadvantages of various media. Limited enrollment. *Meets on the St. Paul campus, Tuesdays, 6-9 p.m., Sept. 11-Oct. 9, 1984, for 5 meetings; or Tuesdays, 6-9 p.m., Apr. 16-May 14, 1985, for 5 meetings. Call 373-9992 for registration forms and information.*

(Instructor is Timothy B. Clarity, president and chairman of Clarity Coverdale, a full-service advertising agency. He has directed major campaigns for consumer products companies, financial institutions, and hospital holding companies, among others, and is a recipient of the Certified Business Communicator designation from the Business/Professional Advertising Association)

INTRODUCTION TO ADVERTISING DESIGN AND PRODUCTION. \$135.

For those who plan, prepare, or purchase printed graphic material, such as brochures, house organs, or advertisements. The course provides an overview of the graphic production cycle, from initial conceptualization to job delivered to the customer. Topics include concept, design, and layout fundamentals, illustration and photography considerations, typography, and production techniques and methods, including preparation of budgets and production schedules. Techniques demonstrated through visual example, assignment, and lecture. Limited enrollment. *Meets on the St. Paul campus, Mondays, 6-8 p.m., Oct. 15-Nov. 12, 1984, for 5 meetings. Call 373-9992 for registration forms and information.*

(Instructor is Henning Jensen, a graphic designer and art director for Honeywell, Inc., an award-winning exhibiting artist and designer, and a lecturer in commercial art design at the University)

ADVERTISING: PRESCRIPTION FOR SLUMPING SALES. \$150.

Presents successful advertising and marketing case studies of Minnesota-based companies. Beginning with a review of resources available to advertisers large and small, this course examines the realities of advertising—not theories of advertising. Students are exposed to actual advertising strategies followed by evaluation. Marketing and advertising managers from local companies participate in presenting their case studies. Designed for anyone with advertising responsibilities, including small business owners, account executives, retailers, program directors, and agency professionals. Limited enrollment. *Meets on the Minneapolis*

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noncredit courses

campus, Mondays, 6-9 p.m., Mar. 4-Apr. 1, 1985, for 5 meetings. **Call 373-9992 for registration forms and information.**

(Instructors are Dave Kitchel, the marketing services manager with The Family Handyman magazine, Webb Inc., providing support and training nationwide to advertising sales staff; and Tom Sigveland, the vice president of planning for the Haworth Group, Inc., providing marketing and media services planning to major nationwide companies)

PUBLIC RELATIONS FOR THE NON-PR PROFESSIONAL. \$145.

Designed for general managers and other non-PR professionals who want to learn how to use effective public relations to promote their firms, organizations, and/or activities. Gives practical "how to" techniques of public relations. Cuts across the mysteries of public relations and helps you understand how PR can become a powerful tool for every profit and nonprofit organization. What you learn can be used the next day. Guest lecturers provide a wide range of experiences, and the workshop leader will help you learn the basics of PR through the solving of practical problems. This program will benefit individuals interested in moving into a public relations/public affairs career. Limited enrollment. Meets on the St. Paul campus, Saturday, 8:30 a.m.-4:30 p.m. Sept. 22, 1984, for 1 meeting; or Thursdays, 7-9 p.m., Mar. 7-28, Apr. 11, 18, 1985, for 6 meetings. **Call 373-9992 for registration forms and information.**

(Instructor is Lewis E. Lachter, a public relations specialist for the 3M Company for 11 years, and has coordinated press conferences, special media events, and numerous nationwide trade shows. He has taught PR at the University of Minnesota and at the College of St. Thomas)

FOR NON-PUBLIC RELATIONS PROFESSIONALS: HOW TO USE NEWSPAPERS, TELEVISION, AND RADIO TO PROMOTE YOUR ORGANIZATION. \$145.

This seminar on public relations focuses on helping managers and owners learn how to work with the media (newspapers, TV, and radio) to promote their firms and organizations. Topics include (1) How to prepare an effective media list and keep it current, (2) What kinds of information about your firm/organization will the media publish and broadcast? (3) How to "buckshot and rifle shoot" a news release, (4) How to use photographs effectively, (5) How to "sell" a story about your firm/organization, and (6) When to and not to take an editor of radio/TV to lunch. This seminar emphasizes practical methods to get news releases published and broadcast. Limited enrollment. Meets on the St. Paul campus, Sat., Dec. 8, 1984, 8:30 a.m.-4:30 p.m., for 1 meeting. **Call 373-9992 for registration forms and information.**

(Instructor is Lewis E. Lachter [see biography with course above])

Service Organizations

HOW TO BUDGET IN A SERVICE ORGANIZATION. \$145.

Learn to develop a budget tailored to the special needs of the service firm. Designed for financial and nonfinancial executives in service organizations who need special service-oriented techniques to create viable budgets; any service organization manager who works with or is responsible for a budget. Learn to use subjective written analysis in place of the straight-forward numerical analysis customary in manufacturing firms; develop a clearly stated set of long-term goals and short-term actions plans; produce sales, operating, and capital budgets, and a workable cash-flow forecast; decide whether fixed, flexible, zero-based, or computer-based budgeting will work in your company. Limited enrollment. Meets on the St. Paul campus, Thursdays, 6-9 p.m., Nov. 29-Dec. 20, 1984, for 4 meetings. **Call 373-9992 for registration forms and information.**

(Instructor is Bernice Folz, an associate professor and chair of quantitative methods and computer science at the College of St. Thomas. She has worked in business as a systems engineer and a supervisor of software design and maintenance)

noncredit courses

MARKETING FOR SERVICE ORGANIZATIONS. \$150.

Managers of service organizations in the public sector (health, human services, governmental agencies, and the arts) and in the private sector (banking, insurance, advertising) learn how marketing concepts—long associated with manufactured goods—can work in a service organization. Follows the American Management Associations Extension Institutes self-study curriculum and is supplemented by lectures from experienced service-oriented marketing professionals in the community. Topics covered include (1) the nature of service marketing, (2) the service marketing environment, (3) service buyer's behavior, (4) information for service marketing, (5) analysis and planning for service marketing, (6) service policies, (7) distribution of services, (8) service pricing, (9) service advertising, (10) personal selling and sales management, (11) sales promotion and public relations, and (12) organization, direction, and control. Sharing of student experiences and case histories is encouraged. Limited enrollment. Meets on the St. Paul campus, Tuesdays, 6-9 p.m., Feb. 5-Mar. 5, 1985, for 5 meetings. Call 373-9992 for registration forms and information.

(Coordinator and principal instructor is Virginia Greenman, consultant in program and policy development for health and human services. Her clients include the Minnesota Hospital Association, The Minneapolis Foundation, and Piper, Jaffray, and Hopwood, Minneapolis)

LONG-RANGE PLANNING FOR SERVICE ORGANIZATIONS. \$150.

Staff and line managers in service organizations are offered a practical course demonstrating how strategic long-range planning can assist in maximizing opportunities in the face of on-going threats to survival or growth. Addresses the needs of those in both the public and private sectors—for example, banking, insurance, government agencies, advertising, hospitals, arts, community organizations, public and private charities. Topics covered include environmental scanning and issues management; identifying the "culture" of an organization; developing statements of mission, goals, objectives, and priorities; linking planning and budgeting and evaluating how effectively planning has been implemented. Students are encouraged to share questions or problems from their own experience. Follows the AMA self study curriculum and is supplemented by lecture, case studies, and other materials developed by the instructors in their work in the not-for-profit sector in the Twin Cities. Limited enrollment. Offered in cooperation with the American Management Associations Extension Institute. Meets on the St. Paul campus, Thursdays, 6-9 p.m., Apr. 4-May 2, 1985, for 5 meetings. Call 373-9992 for registration forms and information.

(Instructors are Dr. Ann Pflaum, assistant to the Vice President for Planning and Academic Support Services, and Dr. Timothy Delmont, Senior Budget Analyst, Office of Management Planning and President of the Minnesota Chapter, American Society for Public Administration. Both have been intimately involved in long-range planning at the University and also have advised groups such as Guthrie Theater, YWCA, and Minnesota Bureau of Mental Health)

Personal Development and Career Exploration

CAREER EXPLORATION WORKSHOPS. \$24 per workshop.

Whether you are just considering your first career in the world of work or thinking about changing your career (a common action in today's society), here is your opportunity to learn about specific career areas (listed below) that seem to offer good possibilities for success. All workshops include guest lecturers who have demonstrated records of success in their particular careers. You will learn the possibilities for growth and development in your chosen career—what you will have to prepare to begin your career, and actions you should do to actually enter your career. All are half-day workshops on Saturday mornings, 9 a.m. to 12:30 p.m., at the Earle Brown Continuing Education Center on the St. Paul campus of the University.

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noncredit courses

Careers as an Entrepreneur (Sept. 22, 1984)

Careers in Sales (October 6, 1984)

Careers in Public Relations/Public Affairs (October 27, 1984)

Careers in Banking and Finance (November 10, 1984)

Careers in Purchasing as a Buyer (November 17, 1984)

Careers in Communication (March 23, 1985)

Careers in Computers/Information Processing (April 20, 1985)

The faculty for these workshops are interdisciplinary and include persons who are considered as successful in the above career areas and other individuals who are career development professionals. **Call 373-9992 for registration forms and information.**

ASSERTIVENESS TRAINING FOR MEN AND WOMEN. \$135.

Combines useful theory with practical classroom applications and practice to help you put principles to work in everyday life. You can expect to become better at expressing both positive and negative feelings; dealing with conflict and anger; responding to criticism, aggression, and manipulation; constructively solving problems; self-initiation; and projecting a positive self-image. Designed for individuals who want to increase their effectiveness in interpersonal relationships at home, in social situations, or in the work setting. Methods involve class lectures, self-assessment inventories, and simulation exercises. Limited enrollment. *Meets on the Minneapolis campus, Thursdays, 6:30-8:30 p.m., Oct. 4-Nov. 1, 1984, for 5 meetings; or Thursdays, 6:30-8:30 p.m., Apr. 4-May 2, 1985, for 5 meetings.* **Call 373-9992 for registration forms and information.**

(Instructor is Catherine Bloomfield, licensed counseling psychologist and a counselor at the College of St. Catherine. She is also a staff member of Psyche, Inc., a consulting firm)

HOW TO BUILD MEMORY SKILLS. \$150.

Helps you organize your mind and accomplish tasks in half the time. You'll stop going over work two or three times or reading the same report over and over again because you've forgotten something. You should become more at ease—socially and at work—because you will be able to recall people's names, facts about them, details about current events, and highlights of important articles. Learn the essential ingredients for a better memory: a positive attitude, interest, intention, motivation, and goal setting. Limited enrollment. Offered in cooperation with American Management Associations Extension Institute. *Meets on the St. Paul campus, Mondays, 6:30-9:30 p.m. Apr. 8-May 6, 1985, for 5 meetings.* **Call 373-9992 for registration forms and information.**

(Instructor is Joyce Pederson, president of a consulting firm, and an assistant professor of the graduate program in reading education at the College of St. Catherine)

STRESS MANAGEMENT AND PRODUCTIVITY. \$145.

This one-day program is aimed at managers and other business and industry professionals experiencing excessive job stress. Emphasis is on how to develop strategies to minimize resistance from your subordinates and associates and develop their willingness to cooperate with your decisions. Individuals will learn how to recognize situations that trigger stress for them and how to minimize this stress both for themselves and for the benefit of their organization. Key strengths are this seminar's "relaxation techniques," and past participants have described the program as a "realistic" means for understanding stress and its control. Limited enrollment. *Meets on the St. Paul campus, Thursday, 8:30 a.m.-4:30 p.m., Nov. 15, 1984, for 1 meeting.* **Call 373-9992 for registration forms and information.**

(Instructor is Dorothy McClaughlin, president of Candor Associates, Inc. of Minneapolis, a management consulting firm to a number of Fortune 500 firms. She has consulted on such issues as productivity, the changing work force, and communications)

PERSONAL FINANCIAL MANAGEMENT. \$145.

Designed to explain the principles and techniques necessary in building sound personal financial management practices. Participants develop strategies for effective management of investment and savings portfolios in the face of inflation and uncertain rates of return; learn to minimize taxes on income, property transfers, and estate planning; and learn to manage and transfer property using gifts, trusts, annuities, and wills. Limited enrollment. *Meets on the St. Paul campus, Tuesdays and Thursdays, 5:30-7:30 p.m., Oct. 9-25, 1984, for 6 meetings. Call 373-9992 for registration forms and information.*

(Instructor is Andrew Whitman, professor of Insurance at the University, an attorney and a frequent consultant on personal financial management)

Department of Conferences

Microcomputer Laboratory Workshops

These workshops are designed for those wishing to become "computer capable" in using microcomputers for office and business operations. These courses are conducted in the new microcomputer laboratory at the Earle Brown Center on the St. Paul campus. All workshops involve extensive hands-on experience with a personal computer.

For registration information, call 373-4984

INTRODUCTION TO MICROCOMPUTERS. 0.6 CEUs, \$80.

You will learn the components and operations of an IBM-PC microcomputer, how to manage data files, what kinds of software packages are available, and how they are used. Three hours of lecture and three hours of supervised practice on IBM Personal Computers. Recommended prerequisite for other microcomputer courses. Meets 9 a.m. to 4 p.m., Oct. 3, 1984; Jan. 9, 1985; or Apr. 3, 1985. **Call 373-4984 for registration information.**

All the following workshops provide instruction in the software for that office application. It is expected that registrants in these courses will have a working knowledge of the IBM Personal Computer. Those who have not used the IBM-PC are expected to attend a one-hour orientation program to the IBM-PC beginning at 8 a.m. on the first day of the workshop. There will be a \$5 registration fee for this orientation session.

INTRODUCTORY BASIC PROGRAMMING. 1.2 CEUs, \$150.

Communication with the computer. The elements of BASIC programming language. How to write BASIC programs. 12 hours of laboratory instruction on IBM Personal Computers. Meets 9 a.m. to 4 p.m., Oct. 8, 11, 1984; Jan. 15, 17, 1985; or Apr. 9, 11, 1985. **Call 373-4984 for registration information.**

WORD PROCESSING I. 0.6 CEUs, \$80.

You will learn to use the WordStar word processing package for creating and editing small documents, setting margins and tabs, text-formatting options—e.g., centering text, justification, hyphen-help, word-wrap, handling blocks of text, and printing your document. Six hours of laboratory instruction on IBM-PC. Meets 9 a.m. to 4 p.m., Oct. 9, 1984; Jan. 16, 1985; or Apr. 10, 1985. **Call 373-4984 for registration information.**

noncredit courses

WORD PROCESSING II. 0.6 CEUs, \$80.

Continuation of Word Processing I. Finding and replacing strings of text. Tables and other special formats. Handling longer documents. Putting text in columns. Document-formatting using dot commands. Special printer commands. Meets 9 a.m. to 4 p.m., Oct. 15, 1984; Jan. 22, 1985; or Apr. 16, 1985. **Call 373-4984 for registration information.**

WORD PROCESSING III. \$35.

Supervised laboratory exercises to give proficiency in applying the word processing procedures covered in Word Processing I and II. Meets 9 a.m. to 12 noon, Oct. 22, 1984; Jan. 18, 1985; or Apr. 12, 1985. **Call 373-4984 for registration information.**

PLANNING (ELECTRONIC SPREAD SHEETS). 1.2 CEUs, \$150.

Learn how electronic spread sheets can be used effectively, how to organize information on spread sheets, and what the limitations and pitfalls are. Instruction given on Lotus 1, 2, 3, on the IBM-PC. Users of other spread sheet software—such as Visicalc—can readily apply what they learn. 12 hours of laboratory instruction on IBM-PC. Meets 9 a.m. to 4 p.m., Oct. 10, 12, 1984; Jan. 23, 25, 1985; or Apr. 17, 19, 1985. **Call 373-4984 for registration information.**

FILING SYSTEMS I. 1.2 CEUs, \$150.

How to decide if a data base will fit on a given microcomputer, how to organize information for use in a data base management system, how to implement a filing system. You will use the dBase II software package on the IBM-PC to create several filing systems, and then store, retrieve, and modify in the data base. 12 hours of laboratory instruction on IBM-PC. Meets 9 a.m. to 4 p.m., Oct. 16, 19, 1984; Jan. 29, 31, 1985; or Apr. 23, 25, 1985. **Call 373-4984 for registration information.**

FILING SYSTEMS II. 1.2 CEUs, \$150.

A continuation of Filing Systems I. Designed for those seeking to make optimum use of microcomputers for their office operation. Instruction and supervised practice in advanced and specialized use of the dBase II software package for filing operations. 12 hours of laboratory instruction on IBM-PC. Meets 9 a.m. to 4 p.m., Oct. 23, 25, 1984; Feb. 5, 7, 1985; or May 1, 3, 1985. **Call 373-4984 for registration information.**

FILING SYSTEMS III. \$80.

Supervised laboratory exercises to give proficiency in applying the filing systems procedures covered in Filing Systems I and II. Meets 9 a.m. to 4 p.m., Oct. 29, 1984; Feb. 8, 1985; or May 6, 1985. **Call 373-4984 for registration information.**

INDIVIDUALIZED COMPUTER LEARNING LABORATORY

Individuals wishing to learn computer applications and programming languages can use the Earle Brown Center Personal Computer Laboratory for individually scheduled learning programs. Computer-assisted instruction on the IBM-PC permits you to learn at your own pace. Tutors are available on a scheduled basis to answer specific questions.

Instruction provided in the following programming languages: BASIC, COBOL, FORTRAN, and Pascal. Learning packages are also available in the following computer applications and software: Word Processing—WordStar; Electronic Spread Sheets—Visicalc and Lotus 1, 2, 3; dBase II; programs on Computer Literacy and Personal Financial Management are also available. **For complete information, call 373-4984.**

MacPhail Center Courses

MacPhail Center for the Arts
 1128 LaSalle Avenue, Minneapolis, MN 55403
 Telephone: 373-1925

All the following classes meet at MacPhail Center for the Arts at the above address in downtown Minneapolis.

The following courses are a sampling of offerings at MacPhail. To request a MacPhail Bulletin with a complete listing, please call 373-1925.

PRIVATE INSTRUCTION

For information on private and group instruction available for adults and children in keyboard, voice, winds, percussion, strings, brass, guitar (all styles), Suzuki strings and piano, and Early Childhood Arts Exploration, please call MacPhail Center at 373-1925.

GENERAL COLLEGE CREDIT

Inquire about General College credit, which is available for most adult courses and private instruction.

REGISTRATION INFORMATION

Unless otherwise noted, the following courses will adhere to this calendar:

Fall Quarter	September 20, 1984 to December 8, 1984
Winter Quarter	January 7, 1985 to March 23, 1985
Spring Quarter	April 1, 1985 to June 15, 1985

Mail Registration:

You can register by mail for all courses in this bulletin except private instruction. Please call MacPhail Center at 373-1925 for registration information and materials. You are not registered until your tuition and fees are paid.

In-person Registration:

You can register in person at MacPhail Center, 1128 LaSalle Avenue, during regular office hours.

Monday-Thursday 8 a.m.-7 p.m.

Friday 9 a.m.-5 p.m.

Saturday 8 a.m.-3 p.m.

Summer hours are somewhat shorter; call for exact times.

Registration dates:

Fall Quarter *through September 15, 1984*

Winter Quarter *through December 15, 1984*

Spring Quarter *through March 16, 1985*

Late Fees:

Fall Quarter *No late fee up to September 15, 1984*
As of September 17, \$5

Winter Quarter *No late fee up to December 15, 1984*
As of December 17, \$5

Spring Quarter *No late fee up to March 16, 1985*
As of March 18, \$5

(Course prices subject to change without notice)

Read about abbreviations, symbols, and maps on page 60.

noncredit courses

Keyboard

MacP KAB CLASS PIANO FOR BEGINNERS I. \$72 plus \$5 registration fee and \$3 course fee. Total \$80.

The first of a three-quarter sequence designed to teach students to sight read easy pieces, improvise an accompaniment for melodies, and play easy classical music. Stresses an understanding of music and keyboard skills through note reading, ear training, playing by ear, improvising, transposing, and ensemble playing. Held in the piano laboratory, a setting which provides an excellent learning environment for the beginning adult piano student by allowing for individual as well as group ensemble experience. Practice time and access to a piano is necessary. (Limited to 12) *Contact Keyboard Director, 373-1925, for placement into the appropriate level class.*

- Fall Qtr** Sec 1 **M**—6-6:55, MacP 221
Sec 2 **M**—7-7:55, MacP 221
Sec 3 **Tu**—6-6:55, MacP 221
Sec 4 **Th**—12-12:55, MacP 221
- Winter Qtr** Sec 5 **Tu**—6-6:55, MacP 221
Sec 6 **Tu**—7-7:55, MacP 221
Sec 7 **W**—12-12:55, MacP 221
- Spring Qtr** Sec 8 **W**—6-6:55, MacP 221
Sec 9 **W**—7-7:55, MacP 221
Sec 10 **Th**—1-1:55, MacP 221

Contact MacPhail Center for Level II and Level III class schedule.

Voice

MacP VAF FINISHING TOUCHES I. \$93 plus \$5 registration fee and \$5 course fee. Total \$103.

Participants study and perform solo and ensemble songs and scenes while working towards improvement of individual performing skills through body movement, breathing, vocal warm-ups, group discussions, and use of television monitor. Concentrates on refinement of technical and performance abilities and is designed for self-improvement and personal growth, as well as to aid preparation for specific auditions and performances. Meets five times per quarter. (Limited to 15)

- Fall Qtr** Sec 1 **T**—6-8, Oct. 2-30, MacP 416, Bryn
Winter Qtr Sec 2 **Sa**—3:30-5:30, Jan. 12-Feb. 9, MacP 416, Bryn
Spring Qtr Sec 3 **Sa**—3:30-5:30, Apr. 13-May 11, MacP 416, Bryn

MacP VAD UNDERSTANDING YOUR VOICE. \$110 plus \$5 registration fee and \$2 course fee. Total \$117.

Designed to give students a fundamental understanding of the voice and to begin development of useful singing and speaking techniques. Includes a study of the physiology and anatomy of voice with its application to individual class members. Actors, singers, and speakers are all welcome in this class since participants benefit from sharing strengths and problems from their different perspectives. Problems of breathing, body alignment, and release of tension will be analyzed, and exercises will be learned. Questions of diction and tone production will be part of the study. (Limited to 10)

(continued next page)

Read about abbreviations, symbols, and maps on page 60.

noncredit courses

Fall Qtr	Sec 1	M —6-7, MacP 416, Young
	Sec 2	Th —11 a.m.-12, MacP 416, Braden
Winter Qtr	Sec 3	M —6-7, MacP 416, Young
	Sec 4	Th —11 a.m.-12, MacP 416, Braden
Spring Qtr	Sec 5	M —6-7, MacP 416, Young
	Sec 6	Th —11 a.m.-12, MacP 416, Braden

MacP VAB VOICE AS A SECOND INSTRUMENT. \$110 plus \$5 registration fee and \$2 course fee. Total \$117.

Add voice study to your musical capability and find the applications which better breathing and improved general body use bring to your major instrument. The class works with speaking and singing, developing understanding of the physical function of voice. Exercises are given to improve breathing and body alignment. Release of unnecessary body tension is a major goal.

Fall Qtr	Sec 1	W —11 a.m.-12, MacP 416, Braden
Winter Qtr	Sec 2	W —11 a.m.-12, MacP 416, Braden
Spring Qtr	Sec 3	W —11 a.m.-12, MacP 416, Braden

MacP VAM OPERA WEEK: A PREVIEW. \$68 plus \$5 registration fee and \$2 course fee. Total \$75.

A series of study nights in preparation for the week-long Metropolitan Opera residency at Northrop Auditorium. The class begins seven weeks prior to the Met's arrival, concentrating on one opera each week in the sequence in which they will be performed. The course culminates with attendance at selected Metropolitan Opera performances followed by a final class meeting on May 28.

Spring Qtr Sec 1 **T**—7-8:30 p.m., Apr. 2-May 28, MacP, Bryn

Tickets for Metropolitan Opera performances are not included in tuition.

Guitar

MacP GEA CLASSICAL GUITAR ENSEMBLE. \$40 plus \$5 registration fee and \$2 course fee. Total \$47.

The MacPhail Classical Guitar Ensemble offers a chance for classical guitarists and mandolinists to explore a wide and varied range of music to gain valuable chamber music playing skills, and to enjoy performing as part of a group. Guitarists must have fluent reading skills. All participants are selected by audition. (Limited to 27)

Fall Qtr	Sec 1	Th —8:30-9:30 p.m. MacP 416, Smith
Winter Qtr	Sec 2	Th —8:30-9:30 p.m. MacP 416, Smith
Spring Qtr	Sec 3	Th —8:30-9:30 p.m. MacP 416, Smith

MacP GAB SINGER-GUITARIST PERFORMANCE CLASS. \$90 plus \$5 registration fee and \$1 course fee. Total \$96.

For popular guitarists or singer-guitarists who wish to develop stage presence. The classes cover program organization, light and sound engineering, audience communication, interpretation, special problems, and performance opportunities complete with television replay. (Limited to 10)

Fall Qtr	Sec 1	Tu —8-9 p.m., MacP 327, McNally
Winter Qtr	Sec 2	Tu —8-9 p.m., MacP 327, McNally
Spring Qtr	Sec 3	Tu —8-9 p.m., MacP 327, McNally

Read about abbreviations, symbols, and maps on page 60.

noncredit courses

Flute

MacP AAB INTRODUCTION TO FLUTE. \$91 plus \$5 registration fee. Total \$96.

Class meets nine times per quarter and includes both group and individual instruction for beginners. For information on flute rental and music required, call MacPhail Center. (Limited to 12)

Fall Qtr Sec 1 Sa—1-2, MacP 103, Gilkey

Winter Qtr Sec 2 Sa—1-2, MacP 103, Gilkey

Spring Qtr Sec 3 Sa—1-2, MacP 103, Gilkey

MacP AES MACPHAIL FLUTE CHOIR. \$45 plus \$5 registration fee and \$5 course fee. Total \$55. MacPhail students concurrently registered pay \$35 plus \$5 registration fee and \$5 course fee. Total \$45.

A challenging ensemble using the four instruments of the flute family plus bass line instrument(s), and performing a wide range of literature of all types and periods. The Flute Choir, which meets nine weeks each quarter, is open to intermediate and advanced performers with an audition required. There will be public appearances every quarter. (Limited to 30).

Fall Qtr Sec 1 Sa—10:30 a.m.-11:30, MacP 103, Gilkey

Winter Qtr Sec 2 Sa—10:30 a.m.-11:30, MacP 103, Gilkey

Spring Qtr Sec 3 Sa—10:30 a.m.-11:30, MacP 103, Gilkey

Jazz

Jazz and Improvisation Classes

MacPhail Center has redesigned its approach to the improvisation class, putting its instruction in a performance situation. Combos are formed with people of similar levels, and basic instruction in improvisation, chord reading, and style is shared by faculty members on all the major instruments and voice. *The Gospel/Jazz Chorus* provides additional opportunities for vocalists. See the MacPhail bulletin for more information.

Chamber Music

MacP AEB MACPHAIL CHAMBER MUSIC CLUB. For currently enrolled MacPhail students \$42 plus \$5 registration fee and \$10 course fee (refundable music deposit). Total \$57. For non-MacPhail students \$52 plus \$5 registration fee and \$10 course fee. Total \$67.

The club meets from 7:30 to 10 on Thursday evenings for five weeks each quarter. Individuals and previously formed groups of intermediate and advanced levels are welcome. Each session includes two hours of rehearsing and coaching, and a half-hour group session for a lecture-demonstration or a performance by faculty, club members, or guest artists. Faculty are professional musicians from various instrumental and vocal families with extensive chamber music backgrounds. To be placed with players of similar ability, entering instrumentalists and vocalists should call MacPhail Center to schedule a placement session for the Thursday before the first class. A similar program for young people is offered on Saturday afternoons.

Fall Qtr Sec 1 Th—7:30-10, Oct. 11-Nov. 8, MacP 327

(Preregistration deadline Oct. 1; placement date Oct. 4)

Winter Qtr Sec 2 Th—7:30-10, Jan. 17-Feb. 14, MacP 327

(Preregistration deadline Jan. 7; placement date Jan. 10)

Spring Qtr Sec 3 Th—7:30-10, Mar. 28-May 2, MacP 327

(Preregistration deadline Mar. 18; placement date Mar. 21)

Read about abbreviations, symbols, and maps on page 60.

MASTER CLASS AND WORKSHOP SERIES

Each year MacPhail presents the great virtuosi from Europe, North America, and the Orient. The public is invited to be a part of the audience for these classes and to experience the musical thought processes of these artists. These masters work with students and professional musicians, demonstrate their own artistry, and answer questions for the audience, all in an intimate and congenial atmosphere. Past guests include composer Aaron Copland, pianist Rosalyn Tureck, baritone Gerard Souzay, flutist Jean-Pierre Rampal, string pedagogue Shinichi Suzuki, and cellist Leonard Rose. Professional musicians and advanced students may inquire about auditions to perform in a master class or workshop. Call MacPhail Center for the 1984-85 schedule, 373-1925.

Music Theory

MATERIALS OF MUSIC I, II, III, and IV. \$51 plus \$5 registration fee and \$2 course fee. Total \$58.

MacPhail offers courses in music theory for students who are just beginning music study and for intermediate and advanced students who are seeking practical knowledge to enhance their music performance or composition. Emphasis is placed on rhythm and sight singing, those elements of music most immediately transferable to the student's instrument. Rhythms, meters, intervals, eartraining, sight reading, scales, key signatures, chords, and basic music forms are presented in a manner relevant to the student's intended application. A placement examination is administered to all students who have not enrolled previously in music theory at MacPhail, on the following Mondays at 6 p.m.: **Fall Qtr:** Sept 10. **Winter Qtr:** Dec. 10. **Spring Qtr:** Mar. 18. (Limited to 20)

See the MacPhail Bulletin for days and times, or call MacPhail Center, 373-1925.

Music Appreciation

MacP HAA, HAB, HAC MUSIC APPRECIATION. \$70 plus \$5 registration fee and \$4 course fee. Total \$79.

Designed to acquaint either the musician or non-musician with the major works of each period of music history, from the Baroque period through the most recently composed works. Each quarter, works from orchestral, vocal, and solo instrumental literature will be covered, in hopes that the student may readily recognize the stylistic traits of each period and of various composers. **Fall Qtr:** Baroque, Classical and early Romantic period, from Bach through Beethoven. **Winter Qtr:** Romantic period, Schubert through Wagner. **Spring Qtr:** 20th Century, Debussy, Ravel to present.

Fall Qtr HAA Sec 1 M—7-9, MacP 416, Sipes

Winter Qtr HAB Sec 2 M—7-9, MacP 416, Sipes

Spring Qtr HAC Sec 3 M—7-9, MacP 416, Sipes

Music and Technology

MacP KJA PIANO TUNING AND REPAIR. \$339 plus \$5 registration fee and \$110 course fee. Total \$454.

A course in piano tuning and repairing. A minimum of six hours tuning practice
(continued next page)

Read about abbreviations, symbols, and maps on page 60.

noncredit courses

outside the class is required each week. Pianos are available at MacPhail for these purposes. A certificate is awarded after completion of the course, one season of experience, and tuning of a piano for testing by a panel of judges. (Prereq a secure musical background, although piano playing itself is not necessary. Limited to 12)

Fall Qtr	Sec 1	MW —7-10, Sept 17-Dec. 5, MacP 12, Palm
	Sec 2	TTh —7-10, Sept 18-Dec. 6, MacP 12, Palm
Winter Qtr	Sec 3	MW —7-10, Jan. 14-Apr. 10, MacP 12, Palm
	Sec 4	TTh —7-10, Jan. 15-Apr. 11, MacP 12, Palm
Summer	Sec 5	TTh —9 a.m.-12, May 14-Aug. 1, MacP 12, Palm
	Sec 6	TTh —7-10, May 14-Aug. 1, MacP 12, Palm

Dance

MacP NAG JAZZ DANCE I. \$63 plus \$5 registration fee and \$2 course fee. Total \$70.

For the student who has had no jazz dance. Basic jazz techniques and musical comedy routines are taught. Leotard, tights, and ballet shoes should be worn to the first class.

Fall Qtr	Sec 1	Th —6-7:15, MacP 120, Johnson
Winter Qtr	Sec 2	Th —6-7:15, MacP 120, Johnson
Spring Qtr	Sec 3	Th —6-7:15, MacP 120, Johnson

MacP NAH JAZZ DANCE II. \$63 plus \$5 registration fee and \$2 course fee. Total \$70.

A continuation of *Jazz Dance I* with more advanced technique.

Fall Qtr	Sec 1	W —6-7:15, MacP 120, Johnson
Winter Qtr	Sec 2	W —6-7:15, MacP 120, Johnson
Spring Qtr	Sec 3	W —6-7:15, MacP 120, Johnson

MacP NAE TAP I. \$63 plus \$5 registration fee and \$2 course fee. Total \$70.

For the beginning student. Basic tap technique and routines are taught. Students should wear leotard, tights, and tap shoes to first lesson.

Fall Qtr	Sec 1	Th —7:15-8:30, MacP 120, Johnson
Winter Qtr	Sec 2	Th —7:15-8:30, MacP 120, Johnson
Spring Qtr	Sec 3	Th —7:15-8:30, MacP 120, Johnson

MacP NAF TAP II. \$63 plus \$5 registration fee and \$2 course fee. Total \$70.

A continuation of *Tap I* for students who know most of the basic tap techniques. More advanced techniques and routines are taught.

Fall Qtr	Sec 1	W —7:15-8:30, MacP 120, Johnson
Winter Qtr	Sec 2	W —7:15-8:30, MacP 120, Johnson
Spring Qtr	Sec 3	W —7:15-8:30, MacP 120, Johnson

Photography

MacP PAA PHOTOGRAPHY: THE CAMERA. \$50 plus \$5 registration fee. Total \$55.

A class for those with little or no experience in photography who wish to learn more about cameras, including film types, flash optics, lighting, buying cameras and equipment, and using cameras. The course also includes an introduction to
(continued next page)

Read about abbreviations, symbols, and maps on page 60.

noncredit courses

darkroom procedures and a chance for students to try their hand at photographic printing. Bring camera to first class. (Limited to 24)

Fall Term Sec 1 **W**—6:30-9, Oct 17-Nov 7, MacP 5

Spring Term Sec 2 **W**—6:30-9, May 1-22, MacP 5

MacP PAB BASIC PHOTOGRAPHY I. \$60 plus \$5 registration fee and \$7 course fee. Total \$72.

A five-week class using cameras and black and white darkroom techniques. Students will develop and print their own photographs using the MacPhail Center darkroom. (Limited to 24)

Fall Term Sec 1 **T**—6-9:30, Sept 25-Oct 23, MacP 5

Winter Term Sec 2 **W**—6-9:30, Jan 9-Feb 6, MacP 5

Spring Term Sec 3 **Sa**—9 a.m.-12:30, Apr 6-May 4, MacP 5

MacP PAC BASIC PHOTOGRAPHY II. \$60 plus \$5 registration fee and \$7 course fee. Total \$72.

A five-week class in advanced darkroom techniques including pushing film, dodging and burning, contrast control, kodolith, matting, and framing. Students have access to the MacPhail darkroom both in and outside of class. This is also a good refresher course for those who wish to get back into photography. (Prereq Basic Photography I or previous darkroom experience. Limited to 24)

Fall Term Sec 1 **T**—6-9:30, Oct 30-Nov 27, MacP 5

Winter Term Sec 2 **W**—6-9:30, Feb 13-Mar 13, MacP 5

Spring Term Sec 3 **Sa**—9 a.m.-12:30, May 11-June 8, MacP 5

MacP PAD PHOTOGRAPHY III: INTRODUCTION TO COLOR PHOTOGRAPHY. \$65 plus \$5 registration fee and \$11 course fee. Total \$81.

This six-week class in color developing and printing includes both color slide and color print developing. The course also covers color theory and a survey of color materials, chemistry and equipment. (Prereq PAB, ArtS 1701, GC 1485, or #. Limited to 20)

Winter Qtr Sec 1 **Th**—6-9:30, Jan 10-Feb 7, MacP 5



General Information

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Faculty

The teaching staff in Extension Classes consists primarily of University of Minnesota faculty. In some instances, faculty members from other educational institutions and specialists in professional and business fields have been selected to teach courses. All Extension Classes instructors are approved by the academic departments through which classes are offered.

Additional staff—Faculty other than those listed under each department may be assigned to teach certain courses.

Funding of the Extension Classes program

While the state legislature has begun to help fund Continuing Education and Extension, the Extension Classes program—including instructional, administrative and staff costs, and related costs—is supported mainly by students' tuition. Therefore, depending on overall enrollments, program adjustments are sometimes necessary, as is the cancellation of classes in which enrollment is low.

Student services fee

Continuing Education and Extension 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. (See the *General Information Bulletin* for a list of services and organizations covered by the fee.) Students may obtain a written fee statement at the Student Relations Unit, 150 Williamson Hall, on the Minneapolis campus. The fee must be paid at the Bursar's Office no later than the second week of the quarter. If you have questions, contact the Student Relations Unit (376-1656).

Three student services (health service coverage, Coffman Union membership, and use of athletic facilities) may be elected and paid separately; see descriptions below.

Campus activities, services and facilities

Art rentals, University Art Museum (373-5685)

The University Art Museum maintains a rental collection of framed original prints, watercolors, 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. The rental office is open noon to 4:30 p.m., Monday through Friday. The rental office is located in M-16 Northrop Auditorium (one flight up from the northwest corner of Northrop). The cost is \$5 a work a quarter. Telephone 373-5685 for further information.

The University Art Museum, located on the third and fourth floors of Northrop, has the following exhibit hours:

Monday, Tuesday, Wednesday, Friday	11 a.m. to 4 p.m.
Thursday	11 a.m. to 8 p.m.
Sunday	2 to 5 p.m.

All exhibits are free and open to the public. Posters and catalogs of current and past exhibits are sold in the Museum office, 110 Northrop Auditorium.

Athletic facilities (373-4200)

A Continuing Education and Extension student may use the athletic facilities of the University, during scheduled recreation hours, through either of the following methods.

1. Students registered for three (3) or more credits may pay an athletic facilities fee. The fee is \$13 a quarter or \$19.50 a semester (subject to change). The athletic facilities fee should be paid at the time of registration. The athletic facilities fee will be entered on a receipt separate from the course fee statement. Students must present the receipt when they wish to use athletic facilities.

If students cancel classes, they must surrender the facilities fee receipt at the time of cancellation. **The University reserves the right to cancel athletic facility permits of students who cancel classes and do not surrender the facilities fee receipt.**

The athletic facilities fee will not be refunded after the second week of classes. No tuition refund will be made without surrender of the facilities fee receipt.

2. Students registered for fewer than three (3) credits, or who are registered in noncredit courses, must purchase a Recreational Sports Participation Permit if they wish to use athletic facilities. Call 373-4200 to find out participation permit costs; identify yourself as an Extension student. **This permit does not provide for the use of the golf courses or tennis courts at student rates.**

Recreational Sports Participation Permits may be purchased at Cooke Hall, Bierman Building, or the St. Paul Gymnasium.

Payment of the athletic facilities fee entitles the student to use athletic facilities during the term (fall, winter, spring) for which he or she is registered. However, students registered for spring quarter or spring semester (three credits or more), who pay the athletic facilities fee, may use the golf courses and tennis courts through the summer and fall. Those students registered for spring quarter or spring semester classes who wish to use athletic facilities other than the golf courses or tennis courts may purchase a Recreational Sports Participation Permit for summer use only.

The athletic facilities include pools, gymnasiums, skating rink, tennis courts, fields, diamonds, track, and golf courses. However, there is a separate user charge for the ice rink, tennis courts and golf courses. Separate locker and towel rental is also available.

Since facilities are heavily used, often to capacity, their use may be restricted occasionally.

For further information about athletic facilities, locations, hours, and fees, telephone 373-4200.

Athletic tickets (373-3181)

University students carrying three credits or more are eligible to purchase student athletic tickets for men's intercollegiate athletic events. The football ticket includes swimming, wrestling, track, gymnastics and baseball. The price is \$27. The first home game is on September 8 with Rice and will be reserved seating. Reserved tickets with specific seat assignments will be assigned for all six home games. Tickets will be available for pick up beginning September 4 at Bierman Field Athletic Building.

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, Bierman Field Athletic Building, 373-3181. Hours are 9 a.m. to 5 p.m. Monday through Friday.

Any student enrolled for at least three credits in Extension Classes may purchase one student athletic ticket under any or all of the following plans:

Plan No. 1—FOOTBALL TICKET—\$27 (also guest adjacent ticket at the same price). Admits to all home varsity football games (six games); all games will have reserved seats. Also admits to all regularly scheduled home baseball, gymnastics, swimming, track and wrestling home intercollegiate events—general admission seating. Alternative plans for adjacent seating will be available. For information call 373-3181.

Plan No. 2—BASKETBALL TICKET. Admits to all home, regularly scheduled intercollegiate basketball games. Reserved seating only is available. Prices not established at press time.

Plan No. 3—HOCKEY TICKET. Admits to all home, regularly scheduled intercollegiate hockey games. General admission and reserved seating are available. Prices not established at press time.

Plan No. 4—SWIMMING, GYMNASTICS, TRACK, WRESTLING AND BASEBALL TICKET. Admits to all home, regularly scheduled intercollegiate games in these five sports. Seating is general admission.

All tickets purchased are nontransferable. If a student's classes are canceled by either the University or the student, athletic tickets must be returned to the Athletic Ticket Office. Partial refund, if ticket is canceled, will be made, based on the refund schedule noted on the ticket.

When and Where to Purchase Football (Plan No. 1) Tickets in the Fall: At Bierman Field Athletic Building lobby, 15th Ave. S.E. at 5th St. S.E. Call 373-3181 for details.

Hours—9 a.m. to 5 p.m. daily, Monday through Friday.

Sale of Plans No. 2, 3, and 4: The special plans will be on sale in September. Call 373-3181 for details at that time.

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

1984 Home Football Schedule:

September 8	Rice	October 20	Northwestern
September 29	Ohio State	October 27	Michigan State
October 6	Indiana	November 17	Iowa

Advance Spring Sale: Each spring an advance sale is conducted whereby students may apply for athletic tickets under Plan No. 1, to be picked up at Bierman Field Athletic Building prior to the first home football game. No proof of enrollment is required to order in the spring. Some form of proof of student status, however, must be presented to claim tickets in the fall. Students who register by mail will receive their fee statements by return mail in the order in which registrations are processed. Application may be made by mail in the spring sale. For an application, call the Athletic Ticket Office (373-3181).

Extension students may NOT pick up fee statements in advance at Westbrook Hall. All fee statements will be mailed to students once payments have been recorded. No exceptions will be made.

Women's intercollegiate athletic tickets (373-2255)

Extension students with proof of registration may purchase tickets for women's intercollegiate athletic events at the student price of \$2. Gate sales of tickets begins about one hour before games and meets for basketball, volleyball, gymnastics, swimming, track, and softball.

There is no admission charge to women's events in golf, tennis, and cross country.

Call 373-2255 for schedule information.

Facilities for the handicapped

The Office of Physical Planning at the University of Minnesota has available special maps designed to help students with mobility handicaps get around the Minneapolis and St. Paul campuses. The maps, **Guide for the Handicapped**, indicate handicapped parking areas, building entrance levels, elevators, curb cuts, and accessible buildings.

Those who would like copies of the guides should telephone Disabled Students Counseling and Information Office at 373-3714 or Physical Planning at 373-5765. Similar maps are located in the "Student-Staff Directory."

Telecommunication devices for the deaf (TDDs) are available for use by deaf students at the following locations: Hearing Impaired Services Program, 12 Johnston Hall, 373-3714, weekdays until 4:30 p.m.; Coffman Information Center, 138 Coffman Union, 373-2403,

evenings and weekends until 12 midnight; St. Paul Campus Office for Student Affairs, 190 Coffey Hall, 373-1197, until 4:30 p.m. weekdays; Handicapped Resource Office, 12 Johnston Hall, 376-2727, until 4:30 p.m. weekdays.

For information about the message relay system for the hearing impaired, call the Handicapped Resource Office (376-2727).

For information about the wide variety of services for students with disabilities, contact the Disabled Students Counseling and Information Office (373-3714) or the Handicapped Resource Office (376-2727).

Services for the handicapped

Adapted services and procedures are possible throughout the University of Minnesota. Students and prospective students should make their requests known to the faculty or staff involved as early as possible. See also **Financial Aids, Veterans' Information, Parking, and Facilities for the Handicapped.**

Information, counseling, and referral services are provided for students and prospective students with physical, learning, or emotional disabilities. A student handbook, *Open Doors, Open Minds*, is available upon request. Contact Extension Counseling, 314 Nolte Center (373-3905) or Disabled Students Counseling and Information Office, 12 Johnston Hall (373-3714) for information.

Study skills assistance for students with *learning disabilities and hearing impairments* is offered through the Reading and Study Skills Center, 104 Eddy Hall (373-4193).

Services for students with *hearing impairments* include interpreting, counseling, problem solving, basic skills and study skills tutoring. These services are available through the Hearing Impaired Services Program, Disabled Students Counseling and Information Office, 12 Johnston Hall, 373-3714 (voice or TTY/TDD).

The Division of Vocational Rehabilitation (DVR) Liaison Counselor coordinates services and resources between the University and the state DVR. Assistance is provided with obtaining necessary aids, utilizing existing campus resources such as financial aid and student employment, and providing campus-based DVR services; 12 Johnston Hall, 376-2728 (voice or TTY/TDD).

The Handicapped Resource Office reviews the accessibility of programs, studies the needs of handicapped students, and plans and develops the University's efforts to improve its services and accessibility to handicapped students; 12 Johnston Hall, 376-2727 (voice or TTY).

For information about Students for Equal Access (SEA), a student organization offering mutual support and involvement with concerns of handicapped, call 373-3714 or 376-2727.

Health service (373-3780)

Extension Classes students who register for at least one quarter-length or semester-length class during the academic year or a five-week class during the summer, may enroll in the Boynton Health Service Extended Outpatient Benefits Plan; this plan entitles students to outpatient services through the Boynton Health Service. The cost of the plan is \$63.15 per quarter or \$94.70 per semester.

There are two campus locations for the Health Service. Boynton Health Service/Minneapolis is located on the East Bank campus (see map in this bulletin); Boynton Health Service/St. Paul, a branch facility of the Health Service, is located in 109-111 Coffey Hall, St. Paul campus.

Boynton Health Service/Minneapolis regular hours are 8 a.m. to 5 p.m., Monday through Friday; and 9 a.m. to 1 p.m. on Saturday. Closed Sundays and holidays. The Boynton Health Service/St. Paul hours are 8 a.m. to 4 p.m., Monday through Friday only; it is closed during the summer and quarter breaks. Boynton Health Service/Minneapolis summer hours are 8 a.m. to 4:30 p.m., Monday through Friday only; closed Saturdays, Sundays, and holidays. During hours the Health Service is closed, medical care for *emergencies* is available in the Emergency Department of University Hospitals.

Medical care, health counseling, mental health services, and health promotion services such as immunizations are provided to students who enroll in the plan. No charge is made for general care or for consultations with a specialist on physical or mental health problems. Couple counseling is available without extra cost, if the student is a member of the plan. Those who enroll in the plan also receive diagnostic laboratory and x-ray services.

Physical therapy and x-ray therapy are provided up to a limit of \$300 a quarter. Charges are made for some services such as prescription drugs, eyeglasses, dental services, surgery, and routine physical examinations.

The Extended Outpatients Benefits Plan does not include hospitalization benefits nor coverage for services related to hospitalization nor coverage for in- or out-patient surgery. Students who do not have private hospital-medical-surgical coverage may inquire about the possibility of purchasing such University-sponsored coverage by calling 373-3780.

Under this plan during the academic year, students become eligible for benefits one week prior to the first day of classes of the quarter or semester for which they are registering. Summer Extension students become eligible for prepaid benefits one day preceding the first day of classes of the term for which they are registering.

Students who wish to participate in the Extended Outpatient Benefits Plan should enroll in the plan when they register for classes but no later than the first week of the term. Payment is made using the miscellaneous fee statement form available from Extension Classes in 101 Wesbrook Hall. This statement must be presented when using the Health Service.

Students and students' spouses who do not enroll in this prepaid plan may still use the Health Service, but on a fee-for-service basis.

Students who cancel their registraion through the first week of classes will receive a 100% refund of the Health Service fee upon surrender of the Heath Service receipt. The Health Service fee is not refundable after the first week of classes.

Extension students who are enrolled in the plan for any quarter or semester and who do *not* register for classes during the following quarter or semester may register for the Extended Outpatient Benefits Plan. To register, bring the Health Service receipt for the previous quarter or semester to the cashier, room W220 of the Boynton Health Service no later than the end of the second week of the applicable term between the hours of 8 a.m. and 4 p.m.

For additional information on these and other benefits, call 373-3196 and request the Health Service informational literature or pick it up at 101 Wesbrook Hall. Information on the Extended Outpatient Benefits Plan may also be obtained from the Cashier, W220 Boynton Health Service, telephone 373-3780.

Libraries (373-3082)

The library resources of the University of Minnesota are housed in 35 separate units located on the Minneapolis and St. Paul campuses. The library units which are generally open in the evening and on weekends are the central St. Paul Campus Library, the Engineering Library, Walter Library (East Bank), and Wilson Library (West Bank). If you have questions about library resources, services, etc., call GENERAL LIBRARY INFORMATION (373-3082). For information about library hours, call 373-0066.

Continuing Education and Extension students are entitled to use University library facilities and to borrow books from the University of Minnesota libraries. Extension students are subject to all library regulations, including those covering loan periods, fines on overdue books, and recalls of books needed by other patrons or for course reserves. **Presentation of a current fee statement is required when borrowing books.**

Locker rental service

The rental rate is \$1.50 for a half locker or \$3 for a full locker a term. Padlocks are provided (without charge) while the locker is in use. Locker rental offices for East Bank campus

locations are located in B-78 Coffman Memorial Union (**Lost and Found Desk**); 48 Social Science, Periodical Shop (for West Bank lockers); and on the St. Paul campus at 213 Agricultural Engineering, 32 McNeal, and 231 Classroom Office Building.

Rental fees are deducted from a \$15 locker deposit card. The card must be purchased at the bursar's office on the same campus where the locker is rented: Williamson Hall Bursar, room 145, for East Bank campus; West Bank Cashier Section, Burs(W), for West Bank campus; and St. Paul Cashier Office, 107 Coffey Hall. Refunds are available from the bursar's office for any remaining value on cards.

For more information, contact the locker rental offices in B-78 Coffman (376-3003) or 48 Social Science, Periodical Shop, West Bank Union (376-4864).

Lost and found

Each major building on campus has a lost and found office. Unclaimed items are then forwarded to one of the main lost and found locations: B-78 Coffman Union (central lost and found) on the East Bank; 110 Skyway, West Bank Union, on the West Bank; 70 Coffey Hall, St. Paul campus. Further information available at B-78 Coffman (376-3003) Monday through Wednesday, and Friday, 7:45 a.m. to 4:30 p.m.

Minnesota Union memberships

A Minnesota Union membership card allows part-time students to use all services, programs, and facilities of Coffman Memorial Union, St. Paul Student Center, and the West Bank Union. Students enrolled in at least one University of Minnesota class (credit or noncredit) are eligible to purchase the membership card. The cost of the card is \$22.85 a quarter (subject to change).

The membership card entitles students to reduced rates for films, concerts, dances, and other admission events; recreation and outings services including bowling, billiards, table tennis, table games and amusement games, outings rental equipment; music-listening centers; the Coffman Union Artcraft Studio (dark rooms, ceramics, woodworking, poster making); use of meeting rooms at the St. Paul Student Center and West Bank Union; check-cashing services; discounted membership at the Outdoor Store; and participation in special student events such as tournaments.

Membership cards are available from 8 a.m. to 4 p.m., Monday through Friday, in room 104A Coffman (behind the Information Center on the first floor). After 4 p.m. and on weekends, inquire at the Information Center. For more information, call the CMU Operations Office at 373-0182, between 8 a.m. and 4:30 p.m.

Available without membership are lounge space, lost and found, photocopy service, bus pass sales, food service, and other services (not always available evenings or at all union locations).

Parking facilities (373-3288)

Parking is available for Extension students in several University parking facilities at a nominal rate. In addition to the public parking lots on all campuses, some contract lots (those reserved for University staff during the day) open to the public at 4:30 p.m. weekdays. The Nolte Center and Northrop Auditorium underground garages often are available for general parking, also. **See the parking maps, pages 620 and 622, for locations.**

Rates vary at some East Bank parking lots depending on proximity to campus and whether there are special events scheduled (including games and concerts). The garages may not be open to public parking when these events are scheduled, and some lots may be reserved parking only. Higher rates take effect at 6:30 p.m. on weekdays and 10 a.m. on Saturdays when there are special events.

Currently, parking lots on the West Bank are regular rate all the time. However, parking costs and availability may be affected by events at the Hubert H. Humphrey Metrodome stadium.

Call 373-3288 or 376-PARK for parking information. Reprints of the bulletin parking maps and campus maps are available by calling 376-7500.

Parking for handicapped students—For information on parking for the handicapped, call the University Police Department, 373-3550. The Minnesota state handicapped parking permit may be used at all parking meters and specially marked handicapped parking areas on campus.

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 such as the University Police (open around the clock at 373-3550) or University Information (open weekdays from 7:30 a.m. to 5:30 p.m. at 373-2002). Campus phones **cannot** be used for placing off-campus calls. For a map showing phone locations, call 373-1234. A phone is located in the lobby of Wesbrook Hall.

Police services (373-3550)

The University Police Department is available to Extension students whether it be to report a crime, open a locked car, offer emergency medical treatment (including free ambulance service), provide a speaker on crime prevention, conduct escort services (during the regular school year), or for other reasons relative to personal security or welfare. For routine calls the number is 373-3550. For an emergency dial 133 on any campus phone (except in University hospitals). The number for the escort service is 376-WALK.

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 376-7500.

Student-Staff Directories

University student-staff directories are available at Twin Cities campus bookstores to Extension students with a current fee statement. The directory contains phone numbers and addresses of all University offices, faculty, and staff members and phone numbers and addresses of Twin Cities campus day students.

The Minnesota Daily

The University of Minnesota student newspaper, the **Minnesota Daily**, is available by mail subscription. The **Daily** covers campus and community news and has a feature section on Wednesdays, an arts and entertainment section on Fridays, and a books section on Fridays. Subscription rates are \$12 a quarter for fall, winter, and spring; \$8 for summer sessions; and \$40 a year (180 issues). **Minnesota Daily**, University of Minnesota, 720 Washington Ave. S.E., Suite 351, Minneapolis MN 55414 (376-5550).

Field Experience (OSLO)

Field learning opportunities are available to University students in a number of areas. Departments often have information about internships and other types of field work, and the Office of Special Learning Opportunities (OSLO) in the College of Liberal Arts maintains

directories of a wide range of community resources that can be used for field experience learning. In some cases, it is possible to earn credit for a study project developed in conjunction with the field experience and carried out under the direction of a University faculty member. Students should talk to an instructor or see an OSLO adviser in 220 Johnston Hall. Call 373-7550 for current advising hours.

Concerts and lectures

Northrop Auditorium's Department of Concerts and Lectures presents arts and entertainment events throughout the year. The Northrop Dance Season includes some of the world's leading ballet, contemporary and folk dance companies. The 1984-85 schedule will feature such companies as New York City Ballet, Pacific Northwest Ballet, Dan Wagoner and Dancers, Mazowsze Polish Dance Company, Paul Taylor Dance Company, Les Ballets Trockadero de Monte Carlo, Alvin Ailey American Dance Theater, and Dance Theatre of Harlem. Northrop will also co-sponsor the annual holiday special "Nutcracker Fantasy." The Metropolitan Opera performs at Northrop for one week each spring. A lively program of free events are offered each summer. For further information, call the Northrop Ticket Office (373-2345).

Student employment service

Extension students enrolled for six credits or more 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 room 120, Fraser Hall. Upon review of eligibility and qualifications, students may be referred to the employer. The employer makes the hiring decision. Office hours are 8:30 a.m. to noon and 1 p.m. to 4 p.m., weekdays. Applicant interviewing is scheduled during the same hours. Proof of registration is required. For more information and details on eligibility, contact the Student Employment Center, 120 Fraser Hall, on the Minneapolis campus (373-3674).

Theatre

Thousands of University of Minnesota students have attended play performances at the University Theatre. Whether in the modern four-theatre facility of Rarig Center or on board the Minnesota Centennial Showboat, University Theatre audiences see the brightest young talent in the Twin Cities. Performances are offered throughout the year and ticket prices remain low. (Extension students are eligible for discounts.) Information about current offerings is available by calling 373-2337.

Transportation between campuses (bus)

Transportation between the **Minneapolis and St. Paul campuses** is available Monday through Saturday on special maroon-and-gold buses marked "Route 13." The Minneapolis campus terminal is at Jones Hall (intersection of Pleasant Street S.E. and Pillsbury Drive S.E.). The St. Paul terminal is at the St. Paul Student Center on Buford Avenue at Eckles Avenue. Buses leave these terminals at 10-minute intervals before 6:25 p.m. (weekdays) and at 40-minute intervals from 6:25 to 11:05 p.m. (Monday through Saturday) as follows:

Bus leaves Jones Hall: 6:25 p.m., 7:05, 7:45, 8:25, 9:05, 9:45, 10:25, and 11:05.

Bus leaves St. Paul Student Center: 6:45 p.m., 7:25, 8:05, 8:45, 9:25, 10:05, and 10:45.

There is no charge for riding the bus unless one enters or exits at stops located off campus (see **Student-Staff Directory** for route map and bus stops).

Buses stop on Como Ave. at 29th Ave. S.E., on Carter Ave. at Eckles Ave., and on Gortner Ave. at Fitch Ave. for students using parking lots near those locations. Parking is free at the 29th and Como lot, although there is a 30-cent charge to board or exit the bus (subject to change). Bus fare discount cards for the Como lot can be obtained at the Bursar's office, 145 Williamson Hall and at the University's Transit Services office, 2818 Como Ave. S.E., Minneapolis.

The East-West Bank bus runs Monday through Friday from 7:15 a.m. to 10:55 p.m. (from 6:35 p.m. to 10:55 p.m.; service is every 20 minutes). The West Bank terminal is in front of Blegen Hall, and the East Bank terminal is on Pleasant Street S.E. at Pillsbury Drive (across the street from Jones Hall and Eddy Hall). Current schedule information is posted at each terminal and is available at the student unions and the University's Transit Services office, room 216, Printing and Graphic Arts Building, 2818 Como Ave. S.E., Minneapolis (telephone 373-0374).

University of Minnesota Senate

University of Minnesota students are entitled to serve in the University Senate. The University of Minnesota is one of the few universities in the country in which students may be elected to the academic governing body. So far as is known, it is one of only a few universities whose Extension students also serve in that body.

The University Senate considers matters of importance to the academic governance of the University, including the internal affairs of the institution as well as the role of the University in the community. Student representatives are elected from 19 colleges, schools, or other academic units within the University, including Continuing Education and Extension which is entitled to elect eight senators and eight alternates to the senate. Students elected to the University Senate automatically become members of the Extension Classes Student Board.

Eligibility for candidacy—A candidate for election from Continuing Education and Extension must have earned a minimum of 12 University of Minnesota credits in the last five years and be carrying, at the time of election, three credits in Extension Classes (semester, quarter and special term registrations count equally). Students wishing to become candidates may file for candidacy at 180 Westbrook Hall, Minneapolis campus; or call 376-7500.

Dates for filing are March 4 through April 5, 1985.

Upon application for candidacy, the candidates must provide proof of their eligibility: transcripts indicating they are in good standing and meet the credits-earned requirement, and a fee statement showing credit load. Once certified as a candidate, the student is free to campaign in a manner in harmony with the guidelines (available at time of filing) established by the Assembly Committee on Student Affairs. Extension Classes students will be provided with a brief sketch of each candidate's qualifications.

The eight candidates receiving the greatest number of votes will be elected senators. Alternates will be the group of eight candidates receiving the next highest number of votes.

Election of Extension Classes senators and alternates will be held April 29 through May 12, 1985. Please read the following carefully:

Eligibility for voting—To be eligible to vote in the election a student must be registered for credit in Extension Classes and present a current fee statement when voting.

Polling places—Students may vote by mail or via ballot information distributed in the classroom. Students voting by mail must send a paid fee statement with their ballot. Fee statements will be returned by mail immediately. For information call 376-7500.

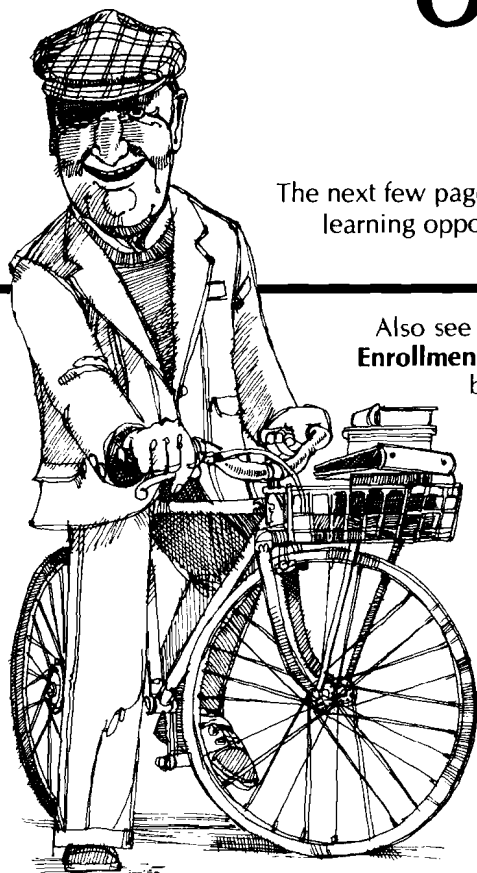
Student Board (Extension Classes)

The Extension Classes Student Board was formed to serve Extension students, faculty, and the administration in the exchange of ideas and information pertaining to the Department of Extension Classes.

It is composed of the student senators and alternates *elected* to the University Senate, *appointed* Extension students, the dean of Continuing Education and Extension (or a representative) and an Extension Classes faculty member. Any Extension student is eligible to be appointed to the Student Board. Eligibility is registration in any Extension class. There is no credit requirement.

All students are urged to communicate their ideas, suggestions, and concerns to their Student Board. Students interested in joining the board, or in talking with members about a particular concern, should call 376-7500 for referral to a board member.

Of Special Interest



The next few pages describe some of the many learning opportunities and student services and facilities open to you.

Also see the **General Information** and **Enrollment Information** sections of this bulletin for information about other programs and services.

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Bookstores: Where to Find What You Need

Purchase your books as early as possible to be assured of getting the materials you need. Each bookstore posts lists of required textbooks for each class. Book information is available by telephone and books can be sent between the St. Paul campus and Minneapolis campus bookstores. (Check the index for the page number where you will find more about bookstores and hours.)



University of Minnesota Bookstores and Locations

The Minnesota Book Center in Williamson Hall—East Bank (373-3688): Courses in the College of Liberal Arts (except for CLA departments listed below at the Smith Bookstore), General College, College of Education, and the Institute of Technology.

Harold D. Smith Bookstore—West Bank (373-4450): School of Management; College of Liberal Arts in history, Afro-American studies, political science, geography, sociology, American Indian studies, theatre arts, studio arts, economics, public affairs, urban studies; and family social science courses offered on the West Bank campus.

Books Underground—St. Paul (373-0800): Books for classes scheduled on the St. Paul campus.

Health Sciences Bookstore—Health Science Unit A (376-4007): Books for classes offered by departments in the Medical School, School of Dentistry, College of Pharmacy, School of Nursing, School of Public Health, Mortuary Science, and other health sciences courses.

College Learning Without College Credit



Informal Courses

Join your neighbors in Informal Courses—short-term, inexpensive, noncredit classes designed to stimulate and inform in the arts and humanities, the natural world, personal growth, social phenomena, and special tours. Through Informal Courses this year, you can learn to take striking outdoor and wildlife pictures, sharpen writing skills in fact and fiction, view films with a critical eye, and evaluate energy use in your home. That's just a sampling. See the complete listing of Informal Courses in the Noncredit Course Offerings section.

Study and Travel Adventures

Informal Courses that offer travel with a difference. **Study and Travel Adventures** are special noncredit tours led by expert instructors. With their insight, and your keen interest in a particular place or culture, you can enjoy a memorable trip even more. Study and Travel Adventures come in a variety of packages, from two days to two weeks, but all feature pre-departure lectures and limited group size to help you combine the pleasure of a vacation with the satisfaction of learning. Destinations this year include Alaska, Austria, Egypt, England, the Rocky Mountains, Minnesota's north shore and north woods, Peru, Rome, and more. See the Informal Courses section of Noncredit Course Offerings in this bulletin, and call 376-7500 for more information.

Sampler Lectures

Samplers offer a touch of class for just a dollar. Each Sampler lecture is a self-contained presentation by an expert. No

preregistration is required; just pay \$1 at the door (persons 62 and older are admitted free). Sampler lectures will again be held at the Earle Brown Continuing Education Center on the St. Paul campus. Lectures begin at 7:30 p.m. There is ample parking in lots next to the Center and across the street. A few Sampler titles from last year were: *Minnesota Wild Flowers*, *The Biology of Cancer*, *Scandinavian Immigration*, *Selecting A Camera*, *Mayan Archaeology*, *Coping With Unemployment*. Sampler announcements are issued twice a year. Call 376-7500 to be placed on the mailing list (your birth date and year are required for coding purposes).

Elderhostel: For Those Over 60

Elderhostel, a living-and-learning program based on the idea that people 60 and older really are getting better instead of older, will offer week-long sessions at the University again this summer and winter.

Elderhostel students stay on campus, interacting with peers and younger students, and take specially designed college-level, noncredit short courses. Extracurricular and evening activities also are offered. Dates are usually during late January and mid-July.

Cost to hostellers in 1984 is \$190 (subject to change) for accommodations, meals, and class instruction.

Elderhostel is a national program now in its ninth year. The University of Minnesota—Twin Cities is one of 25 Minnesota colleges participating.

Typical course titles include *The Arab-Israeli Conflict*, *Creative Writing*, *20th-Century American Music*, *Moral Issues in Health and Law*, and *Murder, Mystery, and Mayhem: Whodunnit?* Call 376-2704 for more information about Elderhostel.

Reduced Tuition and No-credit Options

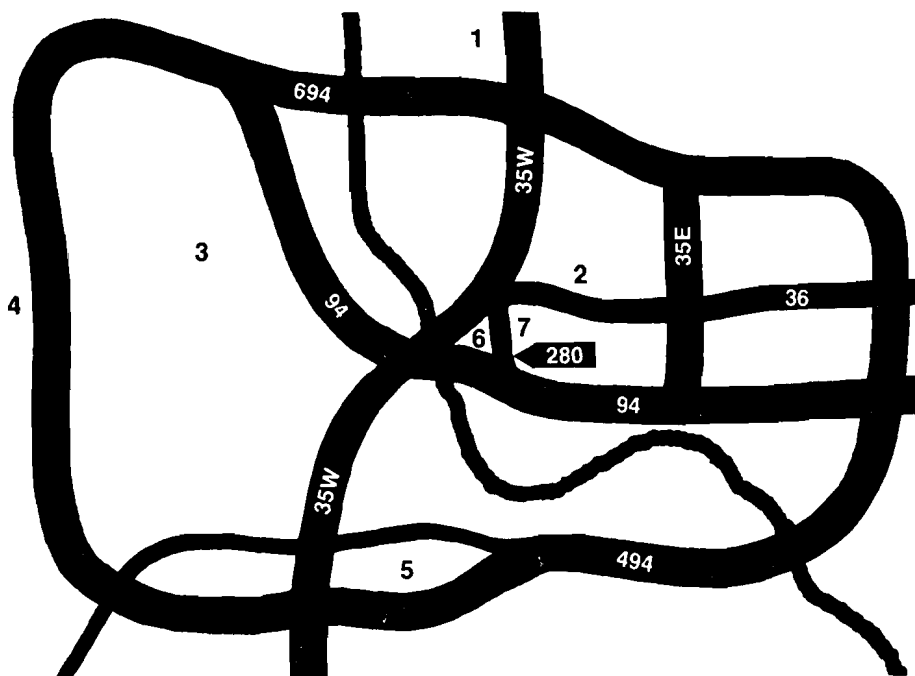
Half-Price Registration: You may register for **no credit** in many regular credit classes. Half-price registration offers the opportunity for the stimulation and learning of college courses without the obligations of earning credit. You pay approximately one-half the usual tuition rate (plus any course fees or special fees). Courses offered for half-price registration are indicated by a ♦ symbol listed in parentheses after the regular tuition. See the **Credit Course Offerings** section of this bulletin. Noncredit students keep up with readings and participate in class discussions, but they do not submit work for evaluation or take examinations (no transcript record is kept). Youth age 12 to 16 pay only \$3 (plus any course fees or special fees) for noncredit registration in ♦ classes when accompanied by an adult registered for the same course. See reduced-tuition plans in the **Enrollment Information** section.

Library Orientation: Learn to use the University libraries. Each quarter a free, two-evening course is offered entitled "Everyone's Guide to the Whole Library." See Informal Courses in the **Noncredit Course Offerings** section of this bulletin for times, meeting places, and a description.

Senior Citizen Rates: If you're 62 or older, you can register free for no credit in any regular credit Extension class that does not have class size limits. You may take limited-enrollment classes for no credit on a space-available basis. Classes may be taken for credit for only \$6 a credit (space-available basis for limited-enrollment classes). Course fees and special fees must be paid, however. See the **Enrollment Information** section of this bulletin. For noncredit Informal Courses and CEW courses, persons 62 and older, may register for one-half the regular tuition plus any course fees and special fees (see **Enrollment Information** section for details).

Continuing Education Units (CEU): 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 the CEU, contact the Department of Conferences, 131 Nolte Center, on the Minneapolis campus; telephone 373-4984.

Take a Class Near Home or Work



Regularly scheduled Extension classes are held at five convenient neighborhood centers as well as the centrally located Minneapolis and St. Paul campuses of the University.

1. **Irondale High School**, 2425 Long Lake Rd (New Brighton)
2. **Alexander Ramsey High School**, 1261 W. Highway 36 (Roseville)
3. **Robbinsdale/Armstrong Senior High School**, 10635 36th Ave. N. (Plymouth)
4. **Minnetonka Sr High School**, 18301 Hwy 7 (Minnetonka)
5. **Richfield High School**, 7001 Harriet Ave S. (Richfield)
6. **Minneapolis campus of the University of Minnesota**
7. **St. Paul campus of the University of Minnesota**

Check the Neighborhood Centers section near the back of the **Bulletin** for complete information. **Check the Index for page numbers.**

Counseling and Advising: We Can Help

If you ask . . .

What kinds of degrees and certificates can be completed through Extension?

How do I go about planning a program?

How do I choose a career or major that will be consistent with my abilities 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 stop by the Extension Counseling Office, 314 Nolte Center, or call 373-3905.

Continuing Education and Extension's professional staff of program advisers is ready to help you identify your interests and to assist you in formulating your educational and vocational goals.

Advisers and counselors are available without appointment during registration hours and during regular daytime hours, 8 a.m. to 12 noon and 1 to 4 p.m., Monday through Friday. Counselors are available evenings (by appointment), Monday through Thursday from 5 to 8 p.m. Because of parking problems during the day, students who have appointments with counselors should allow an extra half-hour for parking and walking to Nolte Center. (See parking maps near the end of this bulletin.)

Also ask about individual appointments with advisers from the General College, College of Education, School of Management, and Institute of Technology. Telephone 373-3905.

A battery of tests is available (by appointment) to help you learn more about your abilities and interests. The cost (subject to change) is \$76 for students and \$115 for nonstudents.

Career-planning and job-search workshops are offered several times during the year. Call 373-3905 if you're interested in attending these helpful seminars.

The Global Campus



Explore the University of Minnesota's global campus with a study abroad program through the Extension Classes Office of Study Abroad (ECOSA). ECOSA programs are cosponsored by University academic departments, offering courses in several disciplines. In most cases, credits can be applied to distribution requirements, second language requirements, or major requirements for degree programs. Call (612) 373-1855 for information about the study/travel terms below.

Spanish in Cuernavaca: Winter quarter in Cuernavaca, Mexico, cosponsored by the Department of Spanish and Portuguese and ECOSA. Integrates intensive language instruction, culture courses, and field trips with home-stay experience. Prerequisite is one course in Spanish or equivalent; 12-14 credits.

Studio Arts in Mexico: Winter quarter in Cuernavaca, Mexico, cosponsored by the Department of Spanish and ECOSA. Pre-Hispanic, contemporary Mexican folk art provide source of material for studio arts studies; Spanish language instruction. Graduate credit available; 11-13 credits.

Literature in London: Spring quarter in London, England, cosponsored by the departments of English and Theatre Arts and ECOSA. Incorporates literary history, geographical and cultural perspectives into reading and study of literature and drama. Graduate credit available; 12 credits.

Swedish in Växjö: Spring quarter in Växjö, Sweden, cosponsored by the Scandinavian Department and ECOSA. Intensive Swedish language instruction, culture courses, and field trips; 15-16 credits.

French in Montpellier: Spring quarter in Montpellier, France, cosponsored by the Department of French and Italian and ECOSA. Intensive French language

instruction, culture courses, and field trips; 15 credits.

Polish in Lublin: Summer term at Marie Curie-Sklodowska University in Lublin, Poland, cosponsored by the Department of Russian and East European Studies and ECOSA. Polish language instruction, culture course, and one-week field trip; 9 credits.

Summer Study in Israel: Summer program cosponsored by the Department of Ancient Near Eastern and Jewish Studies and ECOSA. Six-week program centered in Jerusalem and focusing on the history, literature, and religion of the "Promised Land." Includes a one-week tour of Israel; 8 credits.

German and Austrian Studies in Graz: Fall quarter in Graz, Austria, cosponsored by the Department of German, the Center for Austrian Studies, and ECOSA. Intensive German language instruction, culture courses, and field trips; 12-13 credits.

International Program in Toledo, Spain: Cosponsored by the College of Liberal Arts, the Ortega y Gasset Foundation, and ECOSA. Spanish language and other courses in the liberal arts; full semester, 18-27 credits.

Minnesota Studies in International Development: Internship program for Third World development. Locations in Colombia, Jamaica, Kenya, Senegal; variable credits.

Be a Sport! Activities for Men and Women



Enjoy recreational sports activities of all kinds to help you keep in shape and to unwind from work or study.

Students who register for 3 credits or more are entitled to use recreational sports facilities by paying the athletic facilities services fee. Students registered for fewer than 3 credits, or in noncredit classes, may purchase the Recreational Sports Participation Permit. You may participate in organized sports and intramurals and in open recreation (use of University athletic facilities such as racquetball and tennis courts, swimming pools, and gymnasiums). Also see the note below.

The individual, dual, and team intramural sports include soccer, tennis, basketball, bowling, ice hockey, swimming, broomball, softball, track, volleyball, touch football, and many more.

For men and women, clubs (over 50 of them) are organized for: archery, badminton, ballroom dance, boxing, bowling, crew, soccer, rugby, fencing, cycling, martial arts, sailing . . . plus much more.

And for those who would like to participate in exercise programs (in a group or individually), several aerobic exercise programs are available in a class setting. Also available are motivational fitness programs that can be started anytime during the year (Swim and Stay Fit; Run for Your Life; and the Aerobics Activity Club). Goals are set by the participant.

For further information about these programs and activities, telephone REC SPORTS at 373-4200 or drop in 107 Cooke Hall on the Minneapolis campus. On the St. Paul campus, visit REC SPORTS at 104 St. Paul Gym, 373-0956. Because of heavy use, facility hours and scheduling may be restricted occasionally. The University reserves the right to cancel the facility permits of students who cancel classes.

Note: See the General Information section of this bulletin where regulations and restrictions on athletic facilities use are described in detail.

Busy Evenings? Try Weekend or Daytime Classes

Joint day/Extension classes

In addition to the over 2,000 evening and late afternoon classes listed in this bulletin, many day school classes are open to you this year as **joint day/Extension classes**.

If daytime classes are convenient for you, the variety and number of courses offered during the day may help you accelerate progress toward a degree or certificate. Classes that are offered once every year or two in Extension often are scheduled more frequently in day school.

Check the **Credit Course Offerings** section of this bulletin for departments that will offer joint day/Extension classes this year (a boxed note appears near the beginning of the department's course listings).

Call 376-3000 about two weeks before mail registration starts each quarter to request a daytime Class Schedule and procedures for registration through Extension. Students enrolled at the University through the day school may **not** register for day classes through Extension.

Saturday Classes

Give yourself credit for the weekend. Saturday classes are scheduled in studio arts, child psychology, design, family studies, public health, secondary education, mathematics education, introductory sociology, acting, photography, educational psychology, Chinese and Japanese calligraphy, forest resources, engineering review, and physical education as well as noncredit courses offered by Informal Courses, Continuing Education for Women, and the MacPhail Center. For full descriptions, see the **Course Offerings** section of this bulletin.

Student Board: Get Involved

Seeking more graduate-level Extension classes. Improving campus lighting. Reviewing student services and fees. Presenting the Extension student's viewpoint to University and government officials. A forum for ideas and issues.

These are the kinds of concerns, problems, and opportunities the Extension Classes Student Board considers every year—issues important to Extension students. Guests at Student Board meetings have included University president C. Peter Magrath, University vice president Frank Wilderson, and several regents and legislators.

You can join the Student Board at any time when you are registered as an Extension student. Each spring, Extension students are elected to the University Senate, the primary academic governing body of the University. Student senators also serve on the Student Board.

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, call 376-7500 for referral. For information about meetings or joining the board, call 376-7500 or stop by 180 Westbrook Hall weekdays between 8 a.m. and 4:30 p.m.

Study Skills Help and Special Needs



The Extension Classes Reading/Writing Skills Center provides the help you need in note taking, outlining, theme writing, research techniques, reading, grammar, footnoting, preparation of bibliographies, vocabulary, spelling, and book reviewing. There is no phone, so just walk into room 1 Nicholson Hall. The hours are 8 a.m. to 8 p.m., Monday through Thursday; 8 a.m. to 3 p.m. only on Friday. The center is usually open the first two days of final exam week. (The center is closed weekends and during the summer.)

Helpful Courses

Many credit courses (at regular tuition rates) are offered in study skills and communication skills. See, for example, **Reading, Comprehension, and Study Skills (GC 1403)** and **Vocabulary Development (GC 1402)**. For other credit courses, which combine self-directed exercises with tutorial help, see the Reading/Writing Skills Center Courses section of General College in the alphabetical **Credit Course Offerings** section of this bulletin. Also see **How to Study (PO 1001)** and **Efficient Reading (Rhet 1147)**.

Minority Students

Minority students also may contact the appropriate learning and resources center: American Indian, 376-2982; Asian American, 373-7917; Black, 373-7947; Chicano/Latino, 376-8021. Students admitted to the College of Liberal Arts and General College also may check with college advisory offices.

Special Help

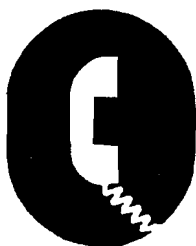
Students with physical or emotional disabilities should contact the Extension Counseling Office, 314 Nolte Center (373-3905), or Disabled Students Counseling and Information Office (373-3714) for special-help information.

Try the University's Digital Information Access Line (DIAL) from your home or a campus phone. Prerecorded tapes answer many questions and refer you to other sources.

Need Information About the University?

Just use your phone. Try the University Digital Information Access Line (DIAL) from your home or a campus phone. Prerecorded tapes answer many of your questions and refer you to further sources of information. Just follow these two easy steps.

1. Dial 373-1857 between 8 a.m. and 5 p.m., Monday through Friday.
2. Request by number the tape you wish to hear. The list below is



only partial. Pick up a brochure listing all available tapes at 209 Eddy Hall on the Minneapolis campus; or call 373-1234 to request one be sent to you.

- 1113 **Getting Extension grades on your day school (college) transcript**
- 1801 **University Child Care Center**
- 1802 **Child care facilities near campus**
- 2100 **Extension registration information**
- 2101 **Program advising**
- 2102 **Counseling**
- 2103 **Extension independent study**
- 2104 **Extension evening classes**
- 2105 **Transfers to Extension; admission to degree programs**
- 2106 **Noncredit, reduced-tuition classes and \$1 Sampler lectures**
- 2107 **Certificate programs**
- 2108 **Degrees through Extension**
- 2109 **Earning credit outside the classroom**
- 2110 **Continuing Education for Women**
- 2113 **Extension classes in neighborhood centers**
- 2114 **Financial aid for Extension students**
- 2115 **Extension Classes office hours**
- 2116 **Extension reading/writing skills center**
- 2117 **Extension Classes Student Board**
- 2206 **Campus Assistance Center**
- 4107 **The CLA adult special student**
- 4201 **Wilson Library information**

Credit Courses by Television and Radio

Extension Independent Study brings the University to you with courses over KTCA-TV (Channel 2) and KUOM Radio (770 AM).

In addition to the courses produced by Independent Study and University Media Resources, some television-assisted courses are offered in conjunction with miniseries or broadcasts on public or commercial networks. For example, Independent Study has offered courses in conjunction with "Cosmos," "The Winds of War," "Kennedy," and "Nancy Astor." Additional courses may be available during the year.

For a free quarterly brochure, call (612) 376-4925 or write Extension Independent Study, University of Minnesota, 45 Wesbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455.

FALL 1984

FSoS 5230	American Families in Tradition (KUOM)
FSoS 5240	Family Stress and Coping (KTCA)
GCB 3002	Human Genetics, Social Affairs (KTCA)
Hist 1301	American History I (KUOM)
Hort 1010	Home Landscape Gardening (KTCA)
Jour 3173	Magazine Writing (KUOM)
JwSt 3034	Introduction to Judaism: Civilization and the Jews (KTCA)
Phys 1003	The Changing Physical World (KTCA)
Psy 1001	General Psychology (KUOM)
Psy 5604	Understanding Behavior Disorders (KTCA)

WINTER 1985

Educ 5440/HSU 5009 (plus others)	Multidisciplinary Perspectives on Aging (KTCA)
FSoS 5240	Family Stress and Coping (KTCA)
GC 1363	Literature for Children (KUOM)
GCB 3008	Biology of Cancer (KTCA)
Mus 5950	Topics in Music: Music Appreciation (KUOM)
PubH 5642	Child Abuse and Neglect (KTCA)

SPRING 1985

Educ 5440/HSU 5009 (plus others)	Multidisciplinary Perspectives on Aging (KTCA)
Engl 3710	Topics in Literary Criticism: Perspectives on Literature (KUOM)
Geo 1001	Physical Geology (KTCA)
Geo 5051	Physical Geology for Teachers (KTCA)
HSU 5008/PMed 5445	Social and Psychological Aspects of Physical Disability (KTCA)
Ling 1001	The Nature of Human Language (KTCA)
Mus 5702	Twentieth-Century American Music (KUOM)
Phys 1003	The Changing Physical World (KTCA)

SUMMER 1985

FSoS 5230	American Families in Transition (KUOM)
Mus 5950	Topics in Music: Music Appreciation (KUOM)

Continuing Education in the Arts

Continuing Education in the Arts (CEA) helps people throughout Minnesota have greater access to the arts and arts programming. CEA provides arts services to individuals and organizations through the following:



Split Rock Arts Program. The setting for this unique arts community combines the maritime atmosphere of Minnesota's favorite summer city, Duluth, with the natural beauty of Lake Superior's spectacular North Shore. Each summer, participants gather for intensive one-week workshops in drawing, painting, crafts, writing, design, and more. Workshops are specially designed to allow participants to explore the area as well as their chosen art form. Workshops are taught by University faculty and outstanding guest artists.

The Center for Local Arts Development. The center provides low-cost management and education assistance to the staff, board members, and volunteers of community-based arts organizations throughout the state. This assistance is offered through one or a combination of the following formats: (1) one-to-one advising and training related to organizational, program, and personnel planning and management; (2) a sequence of noncredit basic arts management skills workshops held in different sites around the state; (3) conferences and intensive seminars for more experienced local arts leaders; (4) referrals and information on individuals, agencies, and other resources to assist with local arts development; (5) ongoing research and advocacy to strengthen support of the arts.

Conferences and Workshops. Dealing with arts-related subjects and the broader area of the humanities and Minnesota's quality of life, CEA develops workshops to meet the needs of today's world.

For more information contact Continuing Education in the Arts, 320 Wesbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455; (612) 373-4947.

Continuing Education for Women 373-9743

It's a matter of choice.

Continuing Education for Women (CEW) offers a variety of topics at times and locations to meet your interests and needs. Now in its third decade, CEW exists to ensure that the University's continuing education efforts are responsive to women's interests.

For example, if you are working on or beginning a degree program, consider CEW credit courses offered during the day at MacPhail Center in downtown Minneapolis. At that convenient central location, credit classes are offered on a once-a-week basis. Look for listings of CEW courses in the credit section of this bulletin—they are marked with this symbol



Noncredit courses range from the **Arts and Culture of the Southwest American Indian to Writing for Women's Magazines**. Classes are scheduled during morning, afternoon, evening, and weekend hours and are offered at a variety of Twin City locations such as the Walker Arts Center, Southdale Library, Walker Library, and the St. Paul College Club. Look for the complete listing in the Noncredit Course Offerings section of this bulletin. Highlights for 1984-85 include:

Fall Quarter: **Investment Programs for People with Incomes under \$20,000; The Bronte World; Middle East Kaleidoscope; From Faust to Steppenwolf; Legal Rights of Women.**

Winter Quarter: **Minnesota's Rural Landscape; Career Dilemmas of Women; Winning Proposals—How to Write Them; Good and Evil; Psychology of Relationships.**

Spring Quarter: **Filing Your Own Tax Forms; Caring Singles; Nuclear Militarism; Gods and Giants of Ancient Scandinavia; Blended Families; Employment and the Woman Over 40.**

Considering taking CEW courses and need financial aid? Contact the Extension Counseling Office (373-3905) for information about the Mucke/ Roff Scholarship for women taking CEW classes.

The Math Anxiety Program—A plan to help students overcome fears and blocks in mathematics. See the section on the Math Anxiety Program in the CEW section of **Noncredit Course Offerings** in this bulletin.

Continuing Education for Women, University of Minnesota, 200 Westbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455.

The Dean's Fund for Continuing Education...

...is your opportunity to help us provide you with exciting new programs and serve people for whom college might not be possible otherwise.

Continuing Education and Extension (CEE) is the University's major outreach program for delivering its faculty, ideas, and programs to you.

Evening Extension classes are one of the more visible CEE educational efforts, but there are many more services available to help you learn more about your world or your profession.

CEE is almost entirely self-supporting—operating costs are covered through student tuition.

The development of new ideas—and the turning of those ideas into programs that will serve many people—requires your help. Your donated dollars can help us reach two major objectives:

● **Providing access to education for more students.** Especially for those for whom the special features of CEE are an educational necessity—part-time, evening, and off-campus instruction; alternative degree options; and the chance to try college-level study. Your contribution can provide...

...scholarships for part-time students (financial aid is very limited for part-time students).

...expanded advising to students seeking degrees and to gifted high school students taking college courses in the evening.

...lower tuition charges for particular audiences, especially those whose incomes are limited.

...courses for older adults, in the community as well as on campus, at low cost.

● **Expanding services and programs to meet important new needs.** Your contribution can help us provide...

...career counseling for adults.

...improved opportunities for graduate study for evening students.

...programs on topics with particular importance in today's society, such as the needs of working women, health issues, and personal development.

...seed money for the development of new courses, scheduling options, and alternative locations and delivery modes (computer instruction, independent study, courses by television).

...state-of-the-art programs to help professionals update their knowledge and skills.

Be an advocate for outreach, for bringing the University into more people's lives, through your tax-deductible contribution to the Dean's Fund for Continuing Education.

To learn how you may contribute, contact The Dean's Fund for Continuing Education, Continuing Education and Extension, University of Minnesota, 150 Wesbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455. Telephone 373-3900 or 376-8286.

Degrees & Certificates

For further information
about degrees and certificates,
telephone Extension Counseling:
373-3905

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Degrees

Several college degrees (two-year and four-year), in more than 25 major areas, may be earned completely through Extension attendance.

Students seeking a college degree through Extension should consult, early in their planning, with an adviser at the Extension Counseling Office (373-3905). Advisers can explain degree requirements, help in course selection, and review transcripts of previous college work.

Simply taking classes and earning credit does not mean a student has been admitted to a degree program. Students must apply to the college which grants the degree. An adviser can explain when and how to apply for admission to a college and help in course selection.

In addition to undergraduate degrees, a master of arts in English (through CEE and the Graduate School), a master of agriculture in food technology (College of Agriculture), and a master of business taxation (M.B.T.) may be completed through Extension classes. A master of arts in speech-communication and a master of agriculture in technical communication are available through a combination of late afternoon and evening classes.

Colleges and degrees are described in detail on the following pages.

Undergraduate degrees

Associate in Arts (A.A.), General College

The General College of the University offers a two-year program of liberal and general studies leading to the Associate in Arts degree. The academic requirements

for the A.A. degree are: admission to the degree program, 90 passing credits, and passing the General College Degree Comprehensive Examination. In addition, the college requires that at least 60 of the 90 credits be distributed throughout the liberal arts and sciences.

Of the 90 credits required for the degree, 45 must be taken in University of Minnesota courses; 30 of these credits must be taken in General College courses, including those offered through the Department of Extension Classes. (A list of General College courses offered through Extension Classes is found in **Course Offerings**.)

A comprehensive examination is used to measure breadth of learning in the college's general education program. This exam covers the main curriculum areas of the college—natural sciences, social sciences, humanities and communication skills. It centers on the relationships that exist among these areas and is designed to measure the extent to which a student demonstrates a general knowledge in the liberal arts.

The Degree Comprehensive Examination usually is taken when the student nears completion of the required 90 credits. Arrangements for taking the test can be made in General College, 10 Nicholson Hall, Student Services Division, telephone 376-2950.

Bachelor of Applied Studies (B.A.S.), General College Bachelor of General Studies (B.G.S.), General College

Students admitted to baccalaureate programs in General College work toward the bachelor of general studies (B.G.S.) or bachelor of applied studies (B.A.S.) degrees. Prospective students who have completed an associate in arts (A.A.) degree or its equivalent with a C-plus average are eligible for admission. All prospective General College baccalaureate students must take **GC 1894 Planning a General College Baccalaureate Program**.

Applicants design their own degree programs and explain them and their educational goals by completing an application form and writing a personal statement. All prospective students with clear educational and occupational goals with a C-plus average (2.40 grade-point) will be admitted.

All of the credits required for both of these baccalaureate degrees in the General College can be completed through Extension. Persons holding A.A. degrees or nearing completion of A.A. degrees may learn more about General College baccalaureate programs by making an appointment with an Extension counselor, 314 Nolte Center, 373-3905.

General College occupation options

Career development programs in the General College provide for a variety of arrangements toward their completion. In a few of them, acceptance by a program coordinator is necessary before the occupational specialty courses may be taken. In some, the specialty courses are available only in day classes, but much of the general education course work is available in Extension Classes. Some of the options leading to General College degrees are combinations of course work in

another post-high school institution and the General College; in most of these cases the General College component can be taken exclusively through Extension. Further information about any of the following programs may be obtained by making an appointment with a counselor in the General College Counseling and Student Development Office, 10 Nicholson Hall, 376-2950, or in the Extension Counseling Office, 314 Nolte Center, 373-3905.

AVIATION TRAINING: Aviation courses and individually designed degree programs in the aviation field are offered in cooperation with the University of Minnesota flight facility. Graduates are eligible for FAA certification as commercial pilots with instruments and multiengine ratings.

FIRE PROTECTION CERTIFICATE: This certificate program is for those concerned with municipal, institutional, and industrial fire protection; insurance or rating bureaus; and manufacture of protective equipment and systems. Basic courses in fire science are offered through the Department of Independent Study; see the certificate description in the Certificates section of this bulletin.

FIRE SERVICE EDUCATION: The General College, in cooperation with the Department of Independent Study, serves as the representative for the Open Learning for Fire Service Program (OLFSP) in the Upper Midwest. Advanced courses in fire science are offered through Independent Study.

LAW ENFORCEMENT/CORRECTIONS: Law enforcement and corrections courses offered by the General College are augmented by advanced courses from the Department of Sociology. This course work prepares students to meet the Minnesota Peace Officers Standard and Training Board requirements or to work in the field of corrections.

RADIOLOGIC TECHNICIAN TRAINING: A program jointly sponsored by the General College and the University of Minnesota Hospitals School of Radiologic Technology, leads to certification and registration in Radiologic Technology and to the A.A. degree. The 27-month program includes 45 credits in technical training and 45 credits in general education. Candidates for the B.A.S. may be granted additional credits for their technical training.

VOCATIONAL TEACHER EDUCATION: A program sponsored by the General College and the College of Education provides an opportunity for current vocational-technical teachers to further their general education. Credit toward an A.A. degree may be granted for previous technical, trade or business training from accredited schools.

VOCATIONAL-TECHNICAL COOPERATIVE PROGRAMS: In order to provide a wide range of opportunities in occupational programs, the General College grants blanket credit toward its degree programs for courses of study completed at all Minnesota public and some private vocational technical schools. The purpose of these arrangements is to combine college courses in general education with specific vocational preparatory programs.

General College certificates

LEGAL ASSISTANT CERTIFICATE: The General College has modified the Legal Assistant Program to be more responsive to the needs of employed legal assistants.

The Legal Assistant Program, which has been in existence since 1972, was

developed as a result of interest expressed by the legal community, experience gained through a pilot project conducted by the University Department of Continuing Legal Education, and encouragement by representatives of the American Bar Association's Committee on Legal Assistants. The program, which has been approved by the American Bar Association, combines general education, related courses, and specific technical training in legal specialty fields.

Applications for the program are available from the Extension Counseling Office or the director of the Legal Assistant Program. The criteria used for selecting students include prior experience as a legal assistant either through a formal program or as an employed legal assistant, performance in prerequisite courses, related work experience, overall grade-point average, and communication skills as demonstrated by personal interviews and the quality of the written statement accompanying the application.

For more information, contact the director of the Legal Assistant Program, 106 Nicholson Hall (373-4168) or the Extension Counseling Office, 314 Nolte Center (373-3905).

MARKETING CERTIFICATE: The marketing certificate program combines general education courses with marketing and other related business courses for students interested in pursuing a career in a business field. Successful completion of the program leads to the granting of a marketing certificate which represents 66 to 72 credits in business courses plus the balance of required credits in general education courses for a total of approximately 90 credits. With appropriate planning, the certificate may be incorporated into the General College's associate degree program or used for admission to a Bachelor of Applied Studies degree program.

Recent General College marketing program graduates have established a pattern of employment in mid-management and administrative/supervisory positions in retail and wholesale trade, manufacturing, banking and finance, transportation and storage, advertising, insurance, and various small businesses.

During the first half of the program, students complete the prerequisite courses, as well as a portion of the general education distribution requirements. During the second half, students complete the remaining general education requirements and the specialty business courses.

Prerequisite courses

Required courses (28 credits)

- GC 1281 Psychology
- GC 1295 Economics: Micro
- GC 1421 Writing Laboratory
- GC 1511 Introduction to Modern Business
- GC 1534 Practical Law
- GC 1540 Accounting I

Electives (two courses, 8-10 credits)

- GC 1454 Statistics
- GC 1530 Financial Administration
- GC 1533 Financial Mathematics
- GC 1535 Data Processing
- GC 1542 Accounting II

Specialty business courses

Required (19 credits)

- GC 1537 Sales
- GC 1551 Introduction to Marketing
- GC 1553 Management
- GC 1517/3517 Internship

Electives (three courses, 12-15 credits)

- GC 1296 Economics: Macro
- GC 1513 Small Business Operations
- GC 1552 Sales Promotion
- GC 1731 Consumer Problems
- GC 1764 Credits and Collections

Students must complete GC 1553, GC 1517, and two additional specialty business classes after admission to the program.

All marketing students participate in the marketing supervised work experience internship program (GC 1517/3517). Students are placed as interns or part-time employees with business in career areas they wish to explore. In some cases, students may choose their own work experience and then arrange to participate in the internship evaluation. This on-the-job experience helps students answer their own career decision-making questions while gaining valuable work experience. The internship may be undertaken after any three of the sales and marketing courses have been completed.

Students wishing to apply for the marketing program should contact Professor Shari Peterson, 373-5244, 106 Nicholson Hall, University of Minnesota, 216 Pillsbury Drive S.E., Minneapolis, MN 55455. Applications are reviewed each winter quarter.

HUMAN SERVICES CERTIFICATE: The principal goal of the Human Services program (46-90 credits) is to train individuals to assume responsibility for unmet needs in the human services delivery system. The program was designed to accomplish five objectives: (1) to help students develop a repertoire of basic interpersonal skills so they can work effectively with individuals, families, groups, or communities on basic mental health and human service problems; (2) to facilitate acquisition of additional or more specialized human services skills; (3) to increase students' ability to transfer their knowledge and skills from one type of human service program or population to another; (4) to encourage students to develop a professional approach and identity apart from a specific discipline or specialty; (5) to provide graduates with access to human services careers at a level between aide and professional.

Although individuals with minimal experience in the human services have been admitted to the human services program, preference is given to persons who have worked in, volunteered for, or been recipients of the human services delivery system. Graduates of this program earn a certificate from General College. Courses in counseling, individual helping skills, group skills, and interviewing comprise part of the program. Field-based internship experiences are also required. Recent graduates have obtained jobs such as counselor, community organizer, information and referral coordinator, teacher of the retarded, senior citizen high rise coordinator, and others.

Some of the required human services courses will be offered in day school and some will be offered in Extension each year. For more information on the program and application process, contact Michael Moser at 376-2638 or an Extension adviser at 373-3905.

AGING STUDIES CERTIFICATE: This is an undergraduate certificate program offered through General College and Continuing Education and Extension. It is designed to train persons already working with older adults or those seeking to do so in such settings as nursing homes, senior centers, community outreach, hi-rises, congregate dining and the larger community. Students are provided with the knowledge, skills, and values needed to work with older persons. The social, psychological, and physical changes that occur with age are examined.

To be admitted into the program, application must be made during the spring quarter. For further information about application to the program, call or write

Daniel Detzner, Coordinator of Aging Studies Program, University of Minnesota, 154 Nicholson Hall, 216 Pillsbury Drive S.E., Minneapolis, MN 55455. Telephone (612) 373-3610 or 373-4988.

See the General College section of the Course Offerings in this bulletin for a list of courses offered this year that are applicable to the Aging Studies Certificate.

Associate in Liberal Arts (A.L.A.), College of Liberal Arts

The Associate in Liberal Arts degree, offered by the College of Liberal Arts, is awarded to students who complete 90-credit programs devoted largely to general education. Students who wish to transfer to professional programs or go on to other education find the degree useful as evidence of achievement in the liberal arts. It is equivalent to half of the bachelor's degree program. Students seeking the A.L.A. through Continuing Education and Extension should talk with a member of the Counseling Department (373-3905).

The current A.L.A. degree requirements:

1. Admission to the degree program.
2. 90 credits acceptable to CLA, 45 of them on A-N grading.
3. No more than 8 credits of non-liberal arts course work may be taken.
4. No more than 8 credits may carry a grade of D.
5. At least 45 University of Minnesota CLA credits.
6. Satisfaction of CLA Writing Practice requirement and Comp 1027 Expository Writing.
7. Satisfaction of four of the following five categories: (a) study of a second language through the college third-quarter level, or exemption based on 3 or more years of high school work (one language only), or exemption by examination; (b) 8 to 10 credits in Group A of the B.A. group distribution requirements (see page 563); (c) 12 to 15 credits in Group B; (d) 16 to 20 credits in Group C with at least one course in each of the sub-areas; (e) 12 to 15 credits in Group D.

Some requirements of the degree program may also be met with credits transferred from other accredited colleges and universities.

A copy of "Procedures for Obtaining the A.L.A. Degree Through Extension" can be obtained from the Counseling Department, 314 Nolte Center, or Extension Classes, 101 Wesbrook.

For the **CLA Bulletin**, call 373-2153. For a list of CLA courses offered through Continuing Education and Extension that meet group distribution requirements, call 373-3905.

Bachelor of Arts (B.A.), College of Liberal Arts

The Bachelor of Arts degree from the College of Liberal Arts can be earned in 18 major fields through Continuing Education and Extension. 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 should talk with a member of the Counseling Department (373-3905) as soon as the decision has been reached.

Candidates for the B.A. degree must complete 180 credits acceptable to CLA (45 of them awarded in University of Minnesota CLA courses, 75 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 Writing Practice requirement, second language, world studies, and group distribution requirements (listed below). Finally, B.A. candidates must complete a major sequence in the field selected and complete at least 30 credits in 3000- or 5000-level courses from areas outside their major department.

Most students try to meet the Writing Practice requirement, second language, and many of their group distribution requirements in their first 90 credits, leaving the last half of their programs free for work in their major field and electives. Though 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 in good standing may apply for admission to majors.

The majors that can be completed entirely in Extension Classes are:

American Studies	History
Architecture	Humanities
Art History	Interdepartmental
Arts, Studio	Philosophy
Child Psychology	Political Science
Classical Civilization	Psychology
Economics	Sociology (B.A. and B.S.)
English	Speech-Communication
Geography	

Majors in other departments—Anthropology, Biology, and Mathematics—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 24 3000- and 5000-level credits in a single department or program. The list of approved minors can be obtained in college offices. For additional information, call Extension Counseling, 373-3905.

The minors that can be completed entirely in Extension Classes are:

Arts, Studio	Humanities-European Focus
Child Psychology	Mathematics
Classical Civilization	Philosophy
Dutch	Political Science
Economics	Sociology
English	Speech-Communication
Geography	Women's Studies
History	

Condensed descriptions of major requirements for these degrees are given with course listings under department headings in this **Bulletin**; a copy of the 1984-1986 **CLA Bulletin** is essential to the CLA degree candidate. It can be obtained by calling the Service Bureau, 373-2153. In addition, a copy of the "Procedures for Obtaining the Bachelor of Arts Degree Through Extension" should be obtained from Extension Classes, 101 Wesbrook Hall, or the Counseling Office, 314 Nolte Center, 373-3905.

Changes in graduation plans

Continuing Education and Extension B.A. candidates usually follow the graduation requirements in use at the time of their admission to CLA (requirements have been altered several times in recent years). Those entering degree programs in or after Fall 1982 must meet the requirements described here. Students absent from CLA for more than two years, if they have fewer than 75 credits, must complete the graduation requirements in effect at the time they reenter. Those with 75 or more credits at the time of last attendance may elect either current requirements or those in effect when they last attended.

For questions regarding graduation requirements, students are encouraged to contact their CLA office or the Extension Counseling office.

English, language, distribution, and world studies requirements

Writing Practice requirement or exemption and 3000-level writing course designated by the major department.

Second Language—Route I or Route II

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

High school study

- 5 years
- 4 years
- 3 years
- 2 years
- 1 year

Additional study in college

- requirement satisfied
- at least 3 cr at higher level in same language
- at least 8 cr at higher level in same language
- at least 13 cr at higher level in same language
- at least 18 cr at higher level in same language

Students with two or more years of Latin in high school may satisfy this requirement by continuing in Latin on the above schedule to the 23 credit minimum or by taking 15 credits in another language; high school study in the other language may also count, in accordance with the schedule in II A below.

Route II. Complete a minimum of 27 credits in the following combination:

A. At least 15 credits in a single second language. Background from high school usually relates to this requirement as follows:

High school study

- 3 years
- 2 years
- 1 year

Additional study in college

- none in college
- 5 credits at higher level in same language
- 10 credits at higher level in same language

B. At least 12 credits (7 for those with 4 years high school study in one language) in courses concerned with the country or countries that use the language in which the student completes 15 credits. (Further study in the language beyond the 15-credit level counts as part of the 12-credit requirement.) A list of eligible courses is available in CLA advising offices and in the Counseling Department, 314 Nolte Center. Courses elected for this purpose may not be used to satisfy the group distribution requirements. Students may receive permission to repeat for

credit any language studied in high school, but then may count only the college work in meeting degree requirements.

Note: A new language graduation requirement will go into effect beginning Fall 1986 for students entering with fewer than 39 credits. It will require the equivalent of six quarters of study in a language. The Route II alternative will be eliminated.

Group distribution requirements

At least 48 credits in four groups, distributed as follows:

Group A—Language, Logic, Mathematics, and the Study of Argument
8-10 credits (normally 2 courses)

Group B—Physical and Biological Universe
12-15 credits (normally 3 courses, one with approved laboratory)

Group C—The Individual and Society
1. Individual and Institutional Behavior
2. The Historical Perspective
3. Social and Philosophical Analysis
16-20 credits (normally 4 courses—at least one from each sub-area)

Group D—Literary and Artistic Expression
12-15 credits (normally 3 courses)

Special notes on group distribution requirements.

1. A maximum of 12 credits from any one department may be used to meet group distribution requirements, even though courses from some departments may be used in different groups. No course may be used in two groups.
2. Courses used for English composition and for language requirements (including courses used for Route II, part B) may not be used for group distribution requirements.
3. The College will offer opportunities to fulfill by examination any distribution requirement except the Group B laboratory requirement. (The CLEP examinations may be used for partial fulfillment.) Extension students may call the Counseling Department (373-3905) for information.
4. Honors courses or sections may be substituted for regular courses or sections (unless otherwise specified).
5. Courses approved for the world studies requirement (see below), which are also approved for the group distribution requirement or Route II language requirement may be used to fulfill both the world studies requirement and the relevant group distribution or language requirement.
6. At least one Group B course must include an approved laboratory and at least two must be from the Group B basic foundation courses offered through Extension and shown on the CLA list of courses that meet group distribution requirements.
7. At least one Group A course should deal specifically with a formal language or a formal symbolic system.
8. Extension students may call 373-3905 for a copy of CLA courses meeting group distribution requirements offered through Extension.

World studies requirement

In order for students to expand the boundaries set by major European and North American educational traditions, students studying for a bachelor of arts degree are asked to examine radically different cultures. Students must take at least two courses (8 to 10 credits) dealing with the cultures of Asia, Africa, or Latin America, or with traditional American Indian cultures. These courses may also be used to satisfy other degree requirements. A list of approved courses is found in Section IV of the CLA Bulletin. A list of Extension classes meeting this requirement can be obtained by calling the Extension Counseling Office, 373-3905. This is a new requirement and does not apply to students entering the college before Fall 1982 or to transfer students entering before Fall 1984.

Bachelor of Fine Arts (B.F.A.), College of Liberal Arts

The Department of Studio Arts offers the Bachelor of Fine Arts to students who demonstrate superior professional promise. It is a "performance" degree, and students must apply through the department to be accepted into the program. Application involves the presentation of a portfolio. Standard CLA requirements (second language, for example) are modified somewhat for students in this degree program. Students should contact the department concerned for details or call the Counseling Office, 373-3905. (This degree is not available entirely through Extension.)

Bachelor of Music (B.M.), College of Liberal Arts

The School of Music offers the B.M. degree for students who demonstrate superior professional promise in the areas of performance, jazz studies, and composition and theory. Students must apply through the department to be accepted into the program. Students should contact the department concerned for details or call the Counseling Office, 373-3905. (This degree is not available entirely through Extension.)

Bachelor of Science (B.S.), College of Liberal Arts

The Bachelor of Science degree is offered by the Departments of Child Psychology, Communication Disorders, Economics, Geography, Sociology, and the Urban Studies program. Its requirements are more concentrated than those of the B.A. program, and no second language is required. (Some of these majors may not be entirely available through Extension.)

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

Bachelor of Individualized Study (B.I.S.), College of Liberal Arts

The Bachelor of Individualized Studies degree enables students to design an individualized program based on their personal academic objectives. Proposals must be evaluated and approved by at least two faculty advisers. With adviser

approval, up to 40 credits of non-CLA course work may be included in the degree program. For further information, call Extension Counseling, 373-3905.

College of Liberal Arts Honors Program

The College of Liberal Arts Honors Program, which provides special educational opportunities to highly motivated and academically accomplished students, is open to Extension students who have some flexibility in their schedules. Some honors courses are available in the late afternoon, but none are offered in the evening. Since upper division students need to complete four honors opportunities or courses in their last two years, interested Extension students should call the Honors Program office (373-5116) and arrange to talk with a staff member.

Honors courses are open to all students irrespective of enrollment in CLA or in Honors. Students enrolled in Honors are given preference for registration in Honors colloquia (small discussion groups for freshman and sophomores) and Honors seminars for juniors and seniors. Extension students who meet the program's requirements are eligible to graduate with one of the traditional Honors designations: cum laude, magna cum laude, summa cum laude.

Bachelor of Science in Business (B.S.B.), School of Management

The B.S.B. degree may be earned through Continuing Education and Extension. Students wishing to complete the B.S.B. degree through Extension should talk with a member of the Extension Counseling Office (373-3905) as soon as they have made this decision.

Candidates for the degree complete a minimum of 180 credits for the regular program and 181 credits for the accounting program, part of which (upon evaluation) may be transferred from other accredited colleges or universities. The first 80 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 grade-point average requirements for admission to the School of Management have risen considerably in the past five years. Students are responsible for consulting an Extension program adviser or counselor at least once every two quarters regarding pre-management and admission requirements.

Upon completion of the pre-management program, students interested in a business degree must make formal application to the School of Management. **A minimum of 40 credits of upper division School of Management course work (3000-level and 5000-level courses offered by departments in the School) must be completed after admission.**

Credits earned at foreign universities, armed forces college credits, or through special examination may be accepted at the discretion of the School of Management staff. Make an appointment with a School of Management adviser at 373-3701 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 School of Management, the current supplement to that bulletin, and the Extension bulletin.

An official college (day school) transcript is created for Extension B.S.B. students at the time of admission. **All Extension B.S.B. students are required to submit a request for transfer of Extension course work to their college transcripts after each quarter of enrollment.** To make a request, write to the Student Relations Unit, 150 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455, and include your birth date, social security number, and University I.D. number.

Admission requirements for CEE students

The following pre-management and upper division requirements apply to students admitted to the School of Management Fall Quarter 1981 and thereafter. Students admitted prior to Fall 1981 will follow the program under which they were admitted.

General admission requirements

To be considered for admission, the following are required.

1. Course work completed or in progress to total 80 credits by the time of admission.
2. Completion of the following "tool" courses on an A-N basis by the time of enrollment: Acct 1024-1025, Econ 1001 and 1002, DSci 1050, and Math 1131 and Math 1142 or Math 1131 and Math 1211. No more than two of these courses may be in progress at the time of application
3. Completion of all but five pre-management courses. Any of the tool courses in progress at the time of application are included in this total.
4. Minimum overall grade-point average in all transferable credits of 2.70 for B.S.B. regular and 2.80 for B.S.B. accounting programs. Grades in the "tool" courses (listed in number 2 above) must average 2.50 for B.S.B. regular and 2.80 for B.S.B. accounting. (Note: The school accepts only the *first* passing grade—D or better—in calculating grade-point averages.)
5. Equivalent courses taken at other institutions (upon evaluation) may be substituted for required University courses.

Admission deadlines

Fall quarter	July 15
Spring quarter	January 15

Pre-management requirements

All required courses are available through CEE. Students are referred to the the *University of Minnesota School of Management 1984-86 Bulletin* for full information on pre-management and upper division requirements, including a list of applicable courses. The bulletin may be obtained by calling 373-2153. Also, a copy of "Procedures for Obtaining the Bachelor of Science in Business Degree Through Extension," and a supplement can be obtained from the Extension Counseling Office, 314 Nolte Center (telephone 373-3905) or Extension Classes, 101 Wesbrook Hall (telephone 373-3196).

When specific courses are not given under the following groups, see the current Supplement for a list of acceptable courses.

Group A—Communication, Language, Symbolic Systems

19 credits; 23 credits for accounting students

1. Comp 1011 (5 credits); A-N grading required
2. Comp 1027 for accounting program (4 credits)
3. Mathematics (10 credits); A-N grading required
 - a. Math 1131 and 1142 or Math 1131 and 1211; Math 1111 is a prerequisite for Math 1131 and 1142.
 - b. One course (4 credits). Logic and symbolic logic courses are recommended. See supplement.

Group B—Physical and Biological Science

9 credits; see supplement

1. Science course with lab (5 credits)
2. History of science or application of science course (4 credits)

Group C—The Individual and Society

13 credits; see supplement

1. Psy 1001 (A-N grade, 5 credits)
2. Two additional courses (8 credits)

Group D—Literary and Artistic Expression

12 credits

1. 4 credits in American/British literature
2. 4 credits in foreign literature
3. 4 credits in Artistic Expression/Humanities

Business-Related Group—Accounting, Economics, and Statistics

18 credits (A-N grading required)

1. Acct 1024-1025 (6 credits)
2. Econ 1001, 1002 (8 credits)
3. DSci 1050 (4 credits). Only the first course completed in introductory statistics will be accepted for degree credit in the School of Management.

Plus additional transferable elective credits to equal a total of 80 credits.

The international requirement is not included in pre-management required courses. However, it is recommended that students begin the international requirement as part of their pre-management program. These courses must normally be taken at the University of Minnesota; an A-N grade is required. Students in the regular program need 12 credits for the international requirement; students in the accounting program need 8 credits. See the supplement for more information.

Requirements for Graduation

UPPER DIVISION REQUIREMENTS

For graduation from the School of Management, students are required to:

1. Complete a minimum of 180 quarter credits for the regular program and 181 credits for the accounting program of which a minimum of 45 credits must be taken at the University of Minnesota.

2. Complete 40 credits of upper division business courses after official admission to the School of Management. (Upper division business courses are those 3000-level and 5000-level courses offered by departments in the School of Management and listed in the School's Bulletin.)
3. Have a minimum grade **average** of C (2.00): (a) overall, (b) on all work taken after admission to the School of Management, and (c) on all upper division business administration courses.
4. Complete upper division course requirements for the appropriate degree program as listed below. Pre-management course requirements as listed above must also be completed and cannot be used to satisfy the upper division requirements listed below.
5. 75 percent of transferable credits completed upon graduation must be on the A-N grading system.

Grade-Point Average—Effective Fall 1982, each credit of N earned after admission to the 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.

Honors—Students with the appropriate grade-point average may graduate with "distinction" or "high distinction." For more information, call the the School of Management (373-3701).

Bachelor of Science in Business—Regular Program

- I. **24 credits Core Course Work** (lock-stepped sequence) to be completed during the student's first three quarters in the School of Management; A-N grading required.
 - First quarter:** Acct 3001 Managerial Accounting (students who completed Acct 1051 before Summer 1981 are exempted from this requirement if admitted to the School of Management prior to Spring 1984)
Mgmt 3001 Fundamentals of Management
 - Second quarter:** MIS 3300 Introduction to Management Information Systems (Extension students may substitute MIS 3100 or 3101 for MIS 3300 during 1984-85 with permission of the School of Management Scholastic Committee.)
BFin 3000 Finance Fundamentals
 - Third quarter:** OM 3000 Introduction to Operations Management
Mktg 3000 Principles of Marketing
- II. **12 credits Course Work** selected from the following; A-N grading required.
 - BGS 3004 International Business (must be taken after Business Core course work; cannot be used for both International and Business Course Work requirement)
 - BLaw 3058 Introduction to Law, and the Law of Contracts and Agency
 - Ins 3100 Risk Management and Insurance
 - IR 3002 Industrial Relations Systems: Labor Markets and the Management of Human Resources
 - DSci 3055 Introduction to Management Science
 - Tran 3054 Fundamentals of Transportation
- III. **12 credits Business Electives** (must be taken after Business Core course work); A-N grading required. MIS 3098, 3099, 5098 may not be used to fill this requirement.
- IV. **9 credits Senior Course Work** to be taken in senior year (after completion of Business Core course work); A-N grading required.
 - BGS 3002 Business and Society (4 credits)
 - Mgmt 3004 Business Policy: Strategy Formulation and Implementation (5 credits)
- V. **8 credits Required Economics**; A-N grading required (economics courses will be offered in alternate years)
 - BGS 3001 or Econ 3105 Managerial Economics
 - Econ 3701 Money and Banking

VI. 12 credits upper division Composition and Speech

Comp 3027 Advanced Expository Writing
Comp 3032 Pre-Professional Writing for Business
4 credits upper division speech chosen from:
Rhet 3254 Advanced Public Speaking
Rhet 3266 Discussion Methods
Spch 3605 Public Speaking
Spch 3641 Discussion and Conference Methods
Spch 5422 Interviewing and Communication
Th 3950 Topics in Theatre: Platform Performance

VII. 12 credits International Requirement (if not taken prior to admission); A-N grading required. See pre-management requirements in the supplement. BGS 3004, if selected, must be taken after admission and after completion of Core Course Work.

VIII. Minimum total of 180 transferable credits required for graduation.

Bachelor of Science in Business—Accounting Program

- I. 24 credits Core Course Work** (lock-stepped sequence) to be completed during the student's first three quarters in the School of Management; A-N grading required.
- First quarter:** Acct 3001 Managerial Accounting (students who completed Acct 1051 before Summer 1981 are exempted from this requirement if admitted to the School of Management prior to Spring 1984)
Mgmt 3001 Fundamentals of Management
- Second quarter:** MIS 3300 Introduction to Management Information Systems (Extension students may substitute MIS 3100 or 3101 for MIS 3300 during 1984-85 with permission of the School of Management Scholastic Committee.)
BFin 3000 Finance Fundamentals
- Third quarter:** OM 3000 Introduction to Operations Management
Mktg 3000 Principles of Marketing
- II. 33 credits Additional Required Course Work;** A-N grading required.
- BLaw 3058 Introduction to Law, and the Law of Contracts and Agency
DSci 3055 Introduction to Management Science
MIS 3099 Elementary FORTRAN (may be taken S-N)
Acct 3101 Accounting Theory and Practice I
Acct 3102 Accounting Theory and Practice II
Acct 3201 Cost Accounting
Acct 5125 Auditing Principles and Procedures
Acct 5135 Income Tax Accounting
Acct 5180 Advanced Accounting
- III. 4 credits Accounting Electives;** A-N grading required (Acct 3199 and Acct 3299 do not apply).
- IV. 5 credits Business Course Work** to be taken in senior year (after completion of Core course work); A-N grading required.
Mgmt 3004 Business Policy: Strategy Formulation and Implementation
- V. 8 credits Required Economics;** A-N grading required (economics courses will be offered in alternate years)
BGS 3001 or Econ 3105 Managerial Economics
Econ 3701 Money and Banking
- VI. 8 credits upper division Composition and Speech**
Comp 3032 Pre-Professional Writing for Business
4 credits upper division speech chosen from:

Rhet 3254 Advanced Public Speaking
Rhet 3266 Discussion Methods
Spch 3605 Public Speaking
Spch 3641 Discussion and Conference Methods
Spch 5422 Interviewing and Communication
Th 3950 Topics in Theatre: Platform Performance

Note: In addition to the two requirements above, Comp 1027 Expository Writing is a required pre-management course (Group A) for accounting students.

VII. 8 credits International Requirement (if not taken prior to admission); A-N grading required. See premanagement requirements in the supplement. At least 4 credits must be from List 1, and the remaining 4 credits may be from either List 1 or List 2. Accounting students should take these courses as premanagement students (with the exception of upper division business courses such as BGS 3004).

VIII. Minimum total of 181 transferable credits required for graduation.
See the School of Management Undergraduate Studies Office for a list of suggested elective courses.

Institute of Technology (B.S.)

Through registration in Extension classes, students may earn a bachelor's degree in Civil Engineering or Electrical Engineering and almost all of a Mechanical Engineering or a Computer Science degree. It is possible to earn all but approximately 12 to 16 credits toward a bachelor's degree in Mechanical Engineering. The Mechanical Engineering degree can then be completed after a limited amount of day school attendance or through University-Industry Television for Education (UNITE). Students can complete most of the Computer Science degree; currently a portion of the upper division option (approximately 24 to 32 credits) is not available entirely through Extension classes.

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 the Extension Counseling Office for more information and application forms. Also see pages 6-8 in the 1983-85 Institute of Technology Bulletin.

A copy of "Procedures for Earning Bachelors Degrees in the Institute of Technology Through Continuing Education and Extension" can be obtained from Extension Classes, 101 Wesbrook Hall, or the Extension Counseling Office, 314 Nolte Center.

Honors—Students with the appropriate grade-point average may graduate with "distinction" or "high distinction." For more information, see page 13 in the 1983-85 Institute of Technology Bulletin.

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 1983-85 **Institute of Technology Bulletin**.

Civil Engineering

(see **Institute of Technology Bulletin** for full course descriptions)

The following courses will be available on a rotating basis over a four-year cycle:

- 3100 Introduction to Surveying and Mapping
- 3200 Introduction to Transportation Engineering
- 3300 Elements of Soil Mechanics
- 3400 Fluid Mechanics
- 3500 Introduction to Environmental Engineering Problems and Analysis
- 3700 Introduction to Construction Materials
- 5002 Engineering Economics
- 5100 Land Surveying
- 5102 Site and Route Engineering
- 5103 Land Planning and Subdivision Design
- 5200 Geometric Design of Highways
- 5201 Highway Traffic Characteristics and Operations
- 5210 Introduction to Transportation Systems Analysis
- 5401 Water Resources Engineering
- 5405 Hydrology and Hydrologic Design
- 5410 Open Channel Hydraulics
- 5420 Introduction to Water Resources Management
- 5500 Analysis and Design of Water Supply Systems
- 5501 Analysis and Design of Waste Water Systems
- 5505 Water Quality and Treatment
- 5600 Linear Structural Systems
- 5610 Design of Metal Structures: Introduction
- 5611 Design of Reinforced Concrete Structures
- 5701 Cemented Materials: Properties, Evaluation, and Mixture Design
- 5702 Manufacture and Quality Control of Construction Materials

Electrical Engineering Curriculum Guide

See also 1983-85 I.T. BULLETIN for full course descriptions.

The bachelor of electrical engineering (B.E.E.) requires completion of a minimum of 190 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, 139 Electrical Engineering, University of Minnesota, 123 Church Street S.E., Minneapolis, MN 55455.

The general requirements listed below apply to students enrolled in the lower division and planning to qualify for the B.E.E. degree.

LOWER DIVISION—General

	<i>Credits</i>
Comp 1011 Writing Practice	5
Math 1211-1221-1231 Calculus I-II-III; Math 3211, 3221, 3231 Multivariable Calculus, Introduction to Linear Algebra and Differential Equations, Vector Analysis	29
Phys 1271-1281-1291 General Physics	12

LOWER DIVISION—General (continued)

	Credits
Phys 1275-1285-1295 General Physics Laboratory	3
Phys 3501 Modern Physics	4
Chem 1014 General Principles of Chemistry*	4
CSci 3104 Introduction to Programming and Problem Solving	5
CSci 3105 Fundamentals of Algorithms and Languages I	4
EE 1000 Introduction to Electrical Engineering	1
EE 1400** Circuits Laboratory	1
EE 3009**-3010 Linear Circuits I-II	8
EE 3351-3352 Logic Design and Microprocessors, Microprocessors	8
Liberal education electives	8
Technical elective (AEM 3036 or Stat 3091 or ME 3301)	4
TOTAL	96

*Chem 1004-1005 may be substituted for Chem 1014.

**EE 1400 and 3009 replace EE 1510 (5 credits). Students who took EE 1510 for 4 credits must take 1400 to complete requirement.

UPPER DIVISION—General

See the *Electrical Engineering Curriculum Guide*, obtainable at either 139 Electrical Engineering or 106 Lind Hall.

Mechanical Engineering

The following table indicates in a general fashion how a program of study leading ultimately to the award of a bachelor's degree in Mechanical Engineering might be approached. The courses listed are required courses which are often offered through Extension. They do not include all requirements for the bachelor's degree in Mechanical Engineering. See the 1983-85 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.)

Year	Course Numbers	Quarter	Semester	Total Hours
		(F W S)	(F S)	
1	Math 1211, 1221, 1231	5 5 5		23
	ME 1025	4		
	CSci 3101	4		
2	Phys 1271 (1275), 1281 (1285)		5 5	23
	ME 3900 or Stat 3091	4		
	Math 3221		5	
	AEM 1015	4		
3	Phys 1291 (1295),		5	22
	AEM 3016, 3036	4 4		
	Comp 1011		5	
4	CE 3400	4		24
	ME 3201, 3203, 3205	4 4 4		
5	ME 3301, 3303, 5342	4 4 4		8
	IEOR 5000	4		
	*ME 3701, 3702	2 2		

Day Only or Infrequent Extension Offerings:

MatS 3400

ME 5703, 5704

ME 5254 (Summer Extension)

ME 5260

Chem 1014 (Substitute Chem 1004)

EE 3003/3004 (Substitute EE 3009)

Additional EE (Take EE 3010)

Coherent upper division technical elective program; many courses are scheduled in Extension. See adviser for suitable programs and program approval.

Liberal education courses—27 credits required in addition to Comp 1011 and a senior writing course (36 total). These may be scheduled at any time to maintain a full schedule.

*ME 3701 and 3702 meet concurrently spring quarter; 3701 is a prerequisite for 3702.

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, University Without Walls (UWW) 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 the UWW or ICP attend a "First Step" advising session. Both programs hold these small group information sessions every week. Attendance can be scheduled through each program's office.

The Inter-College Program (ICP) allows students to plan and pursue a cross-college academic program suited to individual needs. The 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 as a contract with guidance and approval from academic 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, the 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 prepared an approved ICP degree contract which totals 180 credits (75 of which are upper division).

Deadlines for submitting applications to ICP vary each year, but approximate dates are May 1 for summer session and fall quarter, November 1 for winter quarter, and February 1 for spring quarter. Additional information is available from 213 Temporary North of Appleby, 376-1253.

University Without Walls (UWW) serves self-directed students with clear educational goals who wish to design and carry out an individualized undergraduate degree program. Students tend to select UWW because they want to optimize the freedom to make choices about what and how to learn. They usually have experiences from outside the University that they want to incorporate into their education and many want to develop new interdisciplinary programs of study.

Students also select UWW for practical reasons like work or family obligations which limit access to traditional programs or distance from campus and university resources.

Students are admitted to UWW on the basis that they can conceive and plan an overall program of study and can identify specific learning resources and strategies. A UWW academic program can combine a variety of learning activities including University day and evening classes, Independent Study courses, self-designed projects, and community or work-related projects. Prior learning which qualifies as college-level can be applied to the UWW degree. It is possible to earn a degree through UWW without coming to campus, although most students arrange visits to campus during their degree program.

UWW students satisfy criteria-based requirements, rather than accumulate a specific number of credits, to earn a bachelor of arts or bachelor of science degree. These graduation requirements incorporate concentrated learning in a single area with broad learning in the liberal arts. Applications to UWW are reviewed throughout the year with specific submission deadlines determined each quarter. Additional information is available at 201 Wesbrook Hall, 373-3919.

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, 213 Temporary North of Appleby, 376-1253.

College of Agriculture Bachelor of Science (B.S.) in Food Science and Technology

Sufficient courses in the major and in other distribution areas are offered through Continuing Education and Extension on a two- to three-year cycle to meet degree requirements in Food Science and Technology. Another major, Consumer Food Science, can be nearly completed through Extension.

Students interested in the bachelor's degree in Food Science and Technology through Extension should contact the Extension Counseling Office (373-3905) as soon as possible.

Students should apply for admission to the College of Agriculture after completing 39 acceptable credits. Application forms for admission are obtainable through Extension Counseling. After a student is admitted, a long-range plan can then be completed, and a departmental adviser in the College of Agriculture will be assigned.

College of Home Economics Bachelor of Science (B.S.) in Interior Design and in Food Science and Technology

It is now possible to obtain bachelor of science degrees in Interior Design and in Food Science and Technology entirely through Continuing Education and Extension.

sion. Other majors which can be nearly completed in this manner are Consumer Food Science and Family Relationships.

Students interested in the bachelor's degrees in Interior Design or in Food Science and Technology through Extension should contact the Extension Counseling Office (373-3905) as soon as possible.

Students should apply for admission to the College of Home Economics after completing 39 acceptable credits. Application forms for admission are obtainable through Extension Counseling. After a student is admitted, a long-range plan can then be completed, and a departmental adviser in the College of Home Economics will be assigned.

Graduate degrees

Be sure to read the section on graduate credit, page 44.

Master of Arts (M.A.) in English

The Department of English, in cooperation with the Graduate School, offers a master of arts through Continuing Education and Extension. This program is designed to provide an opportunity for extending a student's knowledge of British and American literature and the English language.

Requirements for the master of arts degree in English with an emphasis on language and literature (plan B)

COURSE WORK (44 credits): No fewer than nine courses in British and American literature and the English language of which two must be 8000-level courses (one of these a seminar); 8 credits in one or more "Related Fields"; and three Plan B papers. For further details, consult the English department section of the current **Graduate School Bulletin**.

EXAMINATION: A written examination for the M.A. is given in the Fall and Spring Quarters. It will emphasize close analysis and explication. For further details, consult the Director of Graduate Studies in the Department of English.

LANGUAGE: A reading knowledge of *one* classical or modern language approved by the Director of Graduate Studies. The requirement may be satisfied in one of two ways, either by examination, or by completing at the college level at least 15 quarter credits in the language with a grade of A or 20 quarter credits with an average grade of B. There are special programs of course work satisfying the requirement in French, German, Italian, Spanish, and some other languages. For details, consult the Director of Graduate Studies.

ADMISSIONS PROCEDURES: The standards for admission to the M.A. program are listed in the current **Graduate School Bulletin** under the General Information and English department sections. The necessary application forms for admission to the Graduate School may be obtained from the English Graduate Advising Office in 205 Lind Hall (376-7212).

Candidates will be admitted fall, winter, and spring quarters. In the appropriate space on the application form, the applicants should indicate that they are applying for the M.A. program offered through CEE. In addition to academic transcripts, the Department of English requires applicants to submit the following: the applicant's scores on the aptitude portion of the Graduate Record Examination; three letters of recommendation from persons in a position to comment on the applicant's academic ability and promise for success in graduate study; a sample of expository prose, such as a course paper.

Applicants to the Graduate School should make their own arrangements to take the Graduate Record Examination, which will be offered on the University of Minnesota, Minneapolis campus. Application forms are available at the Student Counseling Bureau, 109 Eddy Hall (373-4193) and should be mailed to the Educational Testing Service, Princeton, N.J., at least four weeks in advance of the testing date.

Applicants should request to have their Graduate Record Examination scores and letters of recommendation sent to the Director of Graduate Studies in the Department of English, 205 Lind Hall, by November 15, 1984, for Winter quarter, 1985; by February 15, 1985 for Spring quarter, 1985; and by May 15, 1985, for Summer 1985 and for Fall quarter, 1985.

Candidates are admitted for the M.A. program with the clear understanding that satisfactory completion of the M.A. requirements will not result in admission to the Ph.D. program but that an outstanding performance in course work, and on the M.A. examination, may entitle a student to petition for such admission. A graduate adviser in English will be available for advising candidates and prospective candidates for the M.A. in English offered through Extension.

For further information on the M.A. degree in English, contact the English Graduate Advising Office, 376-7212.

Master of Arts (M.A.) in Speech-Communication

(Late afternoons and evenings)

Recognizing the importance of communication in a great variety of professional settings, increasing numbers of persons working in business, education, industry, government, and service organizations have asked that work in speech-communication be made available to them. As a result, the Department of Speech-Communication in cooperation with the Graduate School and Continuing Education and Extension is offering a series of courses scheduled late afternoons (4:15-6 p.m. on a M-W and a T-Th basis). These courses, added to graduate level courses offered in the evening through Extension Classes, should make it possible for graduate students to finish a master's degree, Plan B, in two academic years. See this year's **Course Offerings Section** for speech-communication classes. Students may register in these courses either through Extension or through the Graduate School. (But see note below on transfer limit.)

Requirements for the master of arts degree in speech-communication (plan B)

COURSE WORK: Students must take a minimum of 20 quarter credits in speech-communication and a minimum of 8 quarter credits in one or more related

fields outside the major. The balance of the credits to be taken to meet the 44 credit minimum requirement for the degree will be chosen by agreement between the adviser and the student.

EXAMINATION: Students must pass a final comprehensive written examination. This examination is composed by the individual student's faculty committee, who follow an outline developed by the student and his or her adviser.

PLAN B PROJECT: Students must submit a "Plan B Project." The project should demonstrate the student's ability to complete relevant research or to report that research in a useful form. It may represent an application of the student's academic work to his or her professional field. Each student registers for 4 credits of Independent Study (Spch 5970), which may be included on the student's degree program, in order to **plan** the project. The Graduate School indicates that it should take approximately 120 clock hours to **complete** the project. A student should not expect to complete the project during the Independent Study course.

ADMISSIONS PROCEDURES: All students seeking to pursue the M.A. degree in Speech-Communication must be admitted to the Graduate School. The Graduate School Bulletin and application forms may be obtained in 307 Johnston Hall, or by calling 373-5542. Applicants are expected to take the Graduate Record Examination, General Test (Verbal, Quantitative, Analytical). Call the Student Counseling Bureau, 109 Eddy Hall, 373-4193, for information. Please read the instructions on the Graduate School application carefully. It is best to apply early, and application (official transcripts, etc.) must be completed by the deadline dates established by the Graduate School. Check with the department for deadline dates.

TRANSFER RULE: At present, graduate students may transfer to a graduate program no more than 40 percent of their program from Extension Classes (CEE).

For further information on the M.A. degree in Speech-Communication, contact George L. Shapiro (373-2568) or J.V. Jensen (373-2617). A brochure is available from the Department of Speech-Communication, 317 Folwell Hall.

Master of Agriculture (M.Agric.) in Food Technology

The Department of Food Science and Nutrition offers sufficient evening courses at the 5000- and 8000-level through Continuing Education and Extension to enable students to complete most of the requirements for the M.Agric. degree, with area of concentration in Food Technology. About three years would be required. The M.Agric. degree is administered by the College of Agriculture and is also available in four other areas of concentration, in each of which it would be necessary to take some day as well as evening classes.

Requirements for the master of agriculture degree in food technology

COURSE WORK (45 credits): A minimum of 27 credits in 5000- or 8000-level courses taken for graduate credit offered in the College of Agriculture, with at least 18 in courses comprising the area of concentration. At least 9 credits must be from a single department or field of study outside the area of concentration. Depending on the area, most of these could be met by the evening program.

ADMISSIONS PROCEDURE: Application forms and information may be obtained from the College of Agriculture office, 277 Coffey Hall, St. Paul. Any student with a baccalaureate degree or equivalent from a recognized college or university may apply for admission to the program. For detailed admission criteria, program and distribution requirements, refer to the brochure "The Master of Agriculture" (which may be obtained by calling the College of Agriculture, 373-0921). For assistance in developing objectives and a proposed plan of study prior to formal application for admission, call the Department of Food Science and Nutrition (373-1071) to arrange a preliminary interview with a faculty adviser. Admission is dependent upon having an adviser.

For information on use of credits earned in Extension in the **Master of Science degree in Food Science**, see the Graduate School Bulletin.

Master of Agriculture (M. Agric.) in Technical Communication

The Department of Rhetoric offers sufficient late afternoon and evening 5000-level courses through Continuing Education and Extension to enable students to complete requirements for the M. Agric. degree in Technical Communication in two to three years. The M. Agric. degree is administered by the College of Agriculture.

Requirements for the master of agriculture degree in technical communication

COURSE WORK (45 credits): At least 18 credits must be taken in the Department of Rhetoric and 9 additional credits in the College of Agriculture. The remaining 18 credits may be taken anywhere in the University (e.g., Computer Science, English, Speech-Communication), provided that all courses taken contribute to the attainment of a clear professional objective. All courses taken must be at the 5000-level. The Department of Rhetoric plans to offer the following courses over the next three years:

- Rhet 5147 Efficient Reading
- Rhet 5170 Managerial Communication
- Rhet 5180 Internship in Technical Communication
- Rhet 5257 Scientific and Technical Presentations
- Rhet 5258 Interviewing: Dynamics of Face-to-Face Communication
- Rhet 5400 Dissemination and Utilization of Information
- Rhet 5500 Research in Communication Strategies
- Rhet 5571 Writing for Special Purposes
- Rhet 5600 Transfer of Technology

ADMISSIONS PROCEDURE: Any student with a baccalaureate degree or equivalent from a recognized college or university may apply for admission to the program. For assistance in developing objectives and a proposed plan of study before formal application for admission, call the Department of Rhetoric (376-4636) to arrange a preliminary interview with a faculty adviser.

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. The program is offered only in the evening through Continuing Education and Extension. 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 years. Students enrolled full-time can complete the program in a shorter period.

Requirements for the master of business taxation degree

Degree requirements—Students are 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, students must make up the deficiencies. These courses may be taken after admission; graduate credit will not be granted in most cases.

Students must complete 45 credits, including 16 credits in business, economics, and accounting, 13 credits in the fundamentals of tax, tax research, tax procedure, and corporate tax, and 16 credits of elective tax courses. At least 4 credits of the course work will serve as a basis for the Plan B project(s). Students must maintain 3.00 grade-point average. The final exam is oral.

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 summer terms.

For further information, contact Frederick R. Jacobs, Director of Graduate Studies, Business Taxation, 645 Management/Economics Building, University of Minnesota, 271 19th Avenue S., Minneapolis, MN 55455; telephone 373-3672.

Certificates

Students not certain they can devote the time necessary to earn a college degree are urged to consider a certificate program. These programs are generally regarded by business and industry as valuable professional and technical preparation for employment and promotion in areas requiring extensive technical knowledge. With careful planning, a certificate can be, if the student wishes, a stepping stone to a degree.

Thirty-three certificate programs are conducted by Continuing Education and Extension (CEE). The curricula are described in detail in the following pages. Certificate programs are organized at the collegiate level; students entering them should have adequate educational preparation or other experience to work effectively with college materials. Certificate programs consist of degree credit courses or a combination of degree and certificate credit courses. Certificate credit courses are college level in quality, and represent an accelerated and specialized approach to the subject matter. Certificate credit classes are not, however, usually transferable to a degree program.

Work on a certificate may be done in Extension Classes, Extension Independent Study, Continuing Education for Women courses, day school, summer session, or any combination of these. (Certificate programs marked with **(IS)** are available

entirely through Extension Independent Study.) A student may transfer credit from other accredited institutions of higher education, although a minimum of 25 percent of credits required for any certificate must be earned at the University of Minnesota. In those certificates requiring 12 or fewer credits, all work must be done at the University of Minnesota. Courses need not be taken in order, except as prerequisites make it necessary.

Certificate requirements may be modified from time to time. Although there is no time limit on the use of credits, no certificate will be granted that represents a certificate program which has been discontinued for more than seven years. No student may apply for more than three certificates.

A student interested in pursuing a certificate program must obtain a copy of "Procedures for Obtaining a Continuing Education and Extension Certificate" which describes criteria for admission. Students are urged to complete an Application for Admission to Certificate Programs at the earliest possible time after completion of 12 credits. Both forms are available at the Extension Classes Office, 101 Westbrook Hall, or the Extension Counseling Department, 314 Nolte Center. There is a \$13 application fee. Advice and information about the various programs, including transfer of credits, may be obtained from the Extension Counseling Office.

Students interested in taking courses toward certificate programs on the S-N grading system should first consult an Extension counselor at 314 Nolte Center, 373-3905.

A student nearing completion of the required work and expecting to receive a certificate must file a Certificate Completion Form at the beginning of the term in which the certificate is to be awarded. A \$15 certificate fee will be required at the time the Certificate Completion Form is filed.

Upon completion of a specified program with at least a C (2.00) average, the student is awarded a certificate. Certificates are awarded by CEE (not by individual University of Minnesota colleges). All certificates are dated and awarded as of each quarter of the academic year. Students receiving senior certificates may participate in the June commencement exercises.

Continuing Education and Extension honors

All Extension Certificates may 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." A student earning a 3.50 grade-point average, or better, in University of Minnesota credits within the certificate will be awarded a certificate "with high distinction." At least 60 percent of the requirements for a certificate with honors must be earned at the University of Minnesota and must be taken on the A-N grading system.

Colleges at the University of Minnesota retain the right to determine honors requirements for a degree; therefore, earning a certificate with honors does not automatically gain a student entry into a college's honors program.

For further information concerning the Honors Program for certificate students, call the Counseling Department, 373-3905.

Guide to certificates offered through continuing education and extension

adult psychiatry	581	information systems analysis and design	598
accounting	593	interior design	590
alcohol and drug counseling education	584	junior accounting	593
art, commercial	585	junior business administration	594
arts, liberal	592	liberal arts	592
associate in management of administrative services	600	management of administrative services	599
behavior analyst	582	mathematics and science	592
business administration	594	mechanical engineering	610
civil engineering	607	mental health	581
commercial art	585	ophthalmology technician certificate	593
computer science	603	pharmacy, geriatric	589
counseling, alcohol and drug education	584	psychiatry, adult	581
credit and financial management	596	real estate	601
design, interior	590	science, engineering and	605
early childhood studies	586	science, mathematics and	592
electrical engineering	607	senior accounting	594
engineering	605	senior business administration	595
fellow in management of administration services	600	training program for mental health workers	581
financial management	596	undergraduate development certificates in	602
fire protection	586	computer science	603
foster care education	587	engineering and science	605
general studies	588	civil engineering	607
geriatric pharmacy	589	electrical engineering	607
human services	589	industrial engineering	609
industrial engineering	609	mechanical engineering	610
industrial relations	597		

Adult Psychiatry certificate

(Training Program for Mental Health Workers)

The Adult Psychiatry Certificate was developed cooperatively by the Department of Continuing Education in Social Work and the Metropolitan Medical Center.

Training program for mental health workers

(9 Credits)

This is a highly personalized, clinically oriented, group-process program designed to upgrade knowledge relevant to practice for persons providing mental health services. Course content will deal with individual behavior, groups, family and current modes of treatment. The program will extend over three quarters.

Faculty is from the Metropolitan Medical Center along with other professionals from the community. All classes will be held at the Metropolitan Medical Center, 900 South 8th Street, Minneapolis.

The program will be limited to 75 students. Preference will be given to those currently employed in mental health or related fields or upon special permission from the program coordinator, Mark Anderson, 347-4216.

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

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

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

AdPy 0103C Training Course for Mental Health Workers (3 credits)

Aging Studies certificate

(30 to 36 credits)

See page 224 for information on the Aging Studies Certificate offered by the General College.

Behavior Analyst in Community Environments certificate

(38 to 44 credits)

The Behavior Analyst in Community Environments Certificate program was developed in response to the growing need for persons trained at the postbaccalaureate level in behavior analysis and therapy. Designed for persons holding an M.A., B.A., R.N., or equivalent degree, it involves approximately one year of full-time study, including a practicum, but requires no formal research. Training is geared to the specific type of clients with whom the student wishes to work. Programming for developmentally disabled persons and families with youngsters with behavior/emotional problems is emphasized.

Graduates are trained for positions in the following areas: state or county agencies (such as state hospitals or county welfare agencies), special education programs, sheltered workshops, day activity centers, private residential facilities and community-based programs for mentally ill or retarded persons. The Behavior Analyst in Community Environments Certificate awarded by CEE at the University may supplement existing credentials but it is not awarded by, or recognized by, the Minnesota Department of Education as a specialized teaching license comparable to those necessary for teaching handicapped students in special education programs in the public schools. While students may work toward the Behavior Analyst in Community Environments Certificate concurrently with teaching licensure, the former does not substitute for the latter. Similarly, while training provided in this program is generally adequate to pass requirements for certification as a Behavior Analyst under the Minnesota Department of Personnel job classification, it is **not** a substitute for such an examination.

Prerequisites

A bachelor's degree, master's degree, R.N. or equivalent from an accredited college. Preferred majors: education, social work, psychology, nursing.

Specific prerequisites required: introductory psychology, learning (operant and classical conditioning), child psychology, personality development and abnormal behavior. Students lacking any of these prerequisite courses will be required to include them in their program work. Students claiming competence in the above areas may be required to pass qualifying examinations.

Grade-point average of 3.00. Factors such as experience and current professional responsibilities will also be considered in admitting students to the program.

Admission Procedures

Application forms are available from the Extension Counseling Office, 314 Nolte Center, telephone 373-3905.

Applications should be submitted to Behavior Analyst in Community Environments Certificate Program, University of Minnesota, Continuing Education and Extension Counseling Department, 314 Nolte Center, 315 Pillsbury Drive S.E., Minneapolis, MN 55455. Applications for 1984-85 will be accepted through August 1, 1984. Applications for 1985-86 will be accepted through May 31, 1985. Preference will be given to people with practical experience dealing with the client population with whom they intend to work. Final review of applications will be made by the Behavior Analyst Certificate Program Committee. Applicants will be notified by the end of August for the 1984-85 admissions and by mid-July for the 1985-86 admissions of their acceptance into the program. Admission to the program is limited.

Core Requirements (30 credits)

At the time this bulletin was going to press, several core requirements were in a final approval stage. Some titles and course topics may change. Admitted students can check with their assigned advisers in late August for updated information.

EPsy 5116 Behavior Analysis in Education is required of all students. In addition, two of the following three courses must also be completed:

EPsy 5302 Workshop: Special Education: Emphasis on Behavior Analysis in Education and Habilitation of Chronic Disabilities

EPsy 5305 Behavior Analysis Procedures with Mildly and Moderately Handicapped People

EPsy 5126 (Title and topic to be approved)

PsyS 5XXX Practicum: Behavior Analysis Certificate Program. All students are required to complete 18 quarter credits of supervised practicum and analysis of professional problems (300 hours of on-site work). The practicum must be done in no less than two, and preferably three, sites. No more than one quarter of practicum may be done in the student's current place of employment. **There will be no exceptions to this regulation.** Practicum placements are available in (1) developmental disabilities, (2) chronic adult disabilities, and (3) programs for behavior problem/emotionally disturbed youth. Students must have permission of the instructor to register for the practicum.

Electives

To round out the student's program, 8 to 14 elective credits in addition to the core courses will be required, dealing with the target populations listed above. While most elective courses are available through Extension classes, some students may find it necessary to enroll in day classes as well. The specific courses selected must be completed while enrolled in the Behavior Analyst Certificate program. Prerequisite courses listed above may not be counted toward the 38-44 credit requirement.

Time Limit

Students have a time limit of three years in which to complete all **core** requirements including the basic three quarters of lecture courses and the 18 practicum credits.

For a more complete description of the program, including a list of courses applicable in each area of concentration, call 373-3905, or write Behavior Analyst

Certificate Program, University of Minnesota, Continuing Education and Extension Counseling Department, 314 Nolte Center, 315 Pillsbury Drive S.E., Minneapolis, MN 55455.

Alcohol and Drug Counseling Education certificate

(48 to 52 credits)

The basic courses for this program are offered through Continuing Education and Extension. Requirements for the certificate include completion of the basic and specialized courses, plus 1000 hours of supervised internship experience. Additional course work is available on an optional basis.

These 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 chemical abuse problems, the courses are also offered to educators, clergy, nurses, law enforcement personnel, social workers, psychologists, and other professional persons who believe this additional special training would help them in dealing with or disseminating information about alcohol and other drug abuses. The sequence is not to be considered in lieu of a professional degree in counseling, nor does successful completion guarantee employment.

A rotating internship experience under professional clinical supervision and in approved and affiliated institutions and agencies is provided for student interns who have successfully completed the basic courses. Prior or concurrent work experience may be submitted by petition to the Internship Program Coordinator as partial satisfaction of the internship requirement. Students may specialize in one of four 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. *A two-quarter commitment is required for all interns to participate in personal growth and counseling supervision groups.* Successful completion of the internship leads to the certificate.

Persons wishing to apply for admission to the program should write to Dr. William Goodman, Alcohol and Drug Counseling Education Program, Family Social Science, 290 McNeal Hall, 1980 Buford Ave., University of Minnesota, St. Paul, MN 55108. Applications are accepted on a continuing basis.

Students interested in continuing their education at the University of Minnesota may wish to use their family social science credits toward the Human Services Program offered through General College, a four-year baccalaureate program offered through the Inter-College Program of University College, or other degrees and certificates offered by the University.

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

Requirements

All courses were formerly with Public Health. Course numbers remain the same.

- FSoS 3026 Assessment of Alcohol and Drug Abuse Problems
- FSoS 3027 Pharmacology and Current Issues of Alcohol and Drug Abuse
- FSoS 3028 Treatment of Alcohol and Drug Abuse Problems
- FSoS 3029 Counseling Skills Practicum I

- FSoS 3030 Counseling Skills Practicum II
- FSoS 3031 Counseling Skills Practicum III
- FSoS 3032 Chemical Abuse and the Family: An Overview
- FSoS 3035 Clinical Internship in Chemical Abuse Problems
- FSoS 3037 Group Therapy: Theory and Practice

In addition, three credits in optional courses must be taken to complete certificate requirements. Information about optional course work may be obtained by calling the Alcohol and Drug Counseling Education Program office at (612) 373-8175.

Any of the above courses may be taken for either undergraduate or graduate credit.

Commercial Art certificate

(59 credits)

The Commercial Art certificate was developed by the Department of Design for students wishing to specialize in the area of commercial art. Students may choose either an illustration or lay-out emphasis.

Students transferring credits to this program from other accredited institutions must take a minimum of 15 credits at the University of Minnesota.

Only courses which have 5 as the second digit may ordinarily be used in a degree program. Courses which have 2 as the second digit may be used as electives in degree programs or, where subject content is evaluated the same, they may meet degree requirements. Only the elective courses portion of the Commercial Art certificate may be taken on the S-N grading system.

Core Requirements (31 credits)

- Dsgn 1201 Introduction to Commercial Art
- Dsgn 1202 Commercial Drawing I
- Dsgn 1220 Commercial Art Media and Studio Techniques
- Dsgn 1521 Design Process: Color
- Dsgn 1523 Design Process: Visual Presentation
- Dsgn 1550 Drafting: Basic Drafting Techniques
- Dsgn 3202 Commercial Drawing II
- Dsgn 3550 Interior Design Presentation

Concentration Requirements: Select A or B

- A. Illustration Emphasis Requirements (20 credits)
 - Dsgn 1231 Commercial Illustration I (4)
 - Dsgn 3523 Design Process: Visual Presentation II or ArtS 3110 Drawing (4)
 - Dsgn 3240 Commercial Illustration II (12)
- B. Lay-out Emphasis Requirements (20 credits)
 - Dsgn 1251 Advertising Design I (4)
 - Dsgn 3252 Advertising Design II (4)
 - Dsgn 3260 Advertising Design III (12)

General Requirements (4 credits)

Dsgn 3280 Portfolio and Visual Presentation Techniques (prereq 24 credits of 3000-level courses)

Electives (4 credits)

Selected Design, Studio Arts and Journalism courses.

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

Early Childhood Studies certificates

The Early Childhood Studies certificates were developed in response to the increasing demand for specialized training for child care employees in the area of Early Childhood Studies and are offered through Continuing Education and Extension.

It is possible for a student to move from a course of study for a certificate into a variety of degree programs. Anyone who contemplates such long-range objectives should consult an Extension adviser before proceeding further so as to avoid any loss of credits or possible future rejection from the degree program.

A minimum of 50 percent of all course work must be taken on the A-N grading system.

For more information on the program call Extension Counseling (373-3905).

Early Childhood Studies certificate

(45 credits)

This certificate, requiring the satisfactory completion of 45 credits of course work, is the equivalent of one academic year of full-time study. All of the credits received in completing the Early Childhood Studies Certificate-45 credits are automatically credited toward the Early Childhood Studies Certificate-90 credits and represent half of its required work load. Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University of Minnesota.

Group I—General Education (30 credits)

Group II—Career-Related (12 credits)

Group III—Supervised Practicum or Field Work (3 credits)

Early Childhood Studies certificate

(90 credits)

The Early Childhood Studies Certificate-90 credits is a continuation of the Early Childhood Studies Certificate-45 credits, expanding the General Education, Career-Related and Field Work requirements to provide a broader base of general knowledge and an opportunity for specialization. The completion of the certificate of 90 credit-hours represents the equivalent of two academic years of full-time university-level study. Students transferring credits to this program from other accredited institutions must take a minimum of 24 credits at the University of Minnesota.

Group I—General Education (60 credits)

Group II—Career-Related (24 credits)

Group III—Supervised Practicum or Field Work (6 credits)

Fire Protection certificate (IS)

(48-52 credits)

The Fire Protection certificate program was planned by the Fire Information Research and Education Center, Agricultural Extension Service/Continuing Education and Extension, and other members of the public and business sector

responsible for fire protection. It is designed to expand the educational opportunities for persons employed by or concerned with municipal, institutional, and industrial fire protection; insurance inspection or rating bureaus; and manufacturers of protective equipment and systems.

Fire Protection certificate courses are now listed as General College (GC) courses and carry degree credit rather than certificate credits. This change took effect July 1, 1981, and is retroactive for five years. Students who have completed FPro courses for this certificate program and who wish to have their transcripts changed to degree credit should write to the Transcript Office, 155 Williamson Hall, 231 Pillsbury Drive S.E., University of Minnesota, Minneapolis, MN 55455.

Fire Protection Certificate credits are accepted toward the Associate in Arts degree in the General College of the University of Minnesota. These credits may also be accepted toward the Bachelor of Applied Studies and the Bachelor of General Studies degrees if they are an integral part of a student's individual proposal at the time of admission to a baccalaureate program.

The Fire Protection courses will be available only through the Department of Extension Independent Study. Courses currently or soon available are marked with an asterisk(*). Equivalent courses may be transferred to this program from other accredited institutions, but a minimum of 12 credits in Fire Protection certificate courses must be earned at the University of Minnesota.

A minimum of 75 percent of all course work must be taken on the A-N grading system.

English Requirement (3-5 credits)

Comp 1011 Writing Practice or Comp 1001 or Spch 0001C or Spch 1101

Core Requirement (33 credits)

IR 0001C—Supervision: Elements of Supervision I

GC 1120—Introduction to Fire Protection*

GC 1121—Hazardous Materials I*

GC 1122—Hazardous Materials II*

GC 1123—Hazardous Materials III*

GC 1124—Fire Prevention and Control*

GC 1125—Fire Protection and Life Safety Systems in Building Design*

GC 1126—Private Fire Protection Systems: Elements*

GC 1127—Private Fire Protection Systems: Applications*

GC 1128—Fire Department Administration*

GC 1129—Organization for Fire Protection

Spread Requirement (12-14 credits)

Psy 1001—General Psychology or Psy 1003—Application of Psychology to Living

Pol 1001—American Government and Politics or

Pol 1031—American Public Policy

Soc 1001—Introduction to Sociology or

Soc 1002—American Community

Foster Care Education certificate

(15 credits/150 training hours)

The overall objectives of this certificate program are to improve services to children

in foster homes by recognizing the importance of, and helping to increase the competency and clarity of, the role definition of foster parents. There is no presumption of developing an "ideal" foster parent role (or social worker role); rather, the foster parent is viewed as an extension of the legal responsibility and service vested by the court under the auspices of a recognized social agency. Both the foster parent and social worker are expected to develop a greater understanding of, and sensitivity to, the stresses experienced by foster children and to clarify their own role in assisting foster children and their parents to cope with these stresses.

Currently the program is being presented at community sites throughout the metropolitan area, in addition to campus locations. Courses are offered in a variety of formats and at various times of the day to provide more opportunities for participation. This versatility has been facilitated by the program's policy of continuous evaluation and the willingness to revise and update with the input of faculty and an advisory committee made up of foster parents and agency representatives. *In addition to foster parents and agency staff, this program is also applicable for day-care providers and parents in general.*

The program must be taken in its entirety at the University of Minnesota. *Each certificate credit is equivalent to 10 training hours in accordance with the State Department of Public Welfare's Rule 1 training requirements for foster parents.*

Completion of the certificate program, although desirable, is not necessary to fulfill Rule 1 training requirements.

Core Requirements (6 credits)
(listed in recommended order)

SW 0010C Issues in Foster Parenting—2 credits

SW 0011C Child or Adolescent Development—2 credits

SW 0012C You, Your Family, and Your Foster Child—2 credits

Electives (9 credits)

The additional courses needed to complete the 15 credits required for the certificate may be chosen from one- and/or two-credit courses covering such topic areas as: abused child, hyperactive child, retarded child, human sexuality, behavior management, drug abuse, stress management, etc. (These courses are listed in the department's quarterly announcements.)

For further information on this program and a list of quarterly offerings, write to the Department of Continuing Education in Social Work, 107 Armory, 15 Church Street S.E., Minneapolis 55455; or call (612) 373-5831.

General Studies certificate (IS)

(45 credits)

The General Studies certificate program is designed to recognize students' achievement after the completion of the equivalent of one year of college course work. There are no required courses in the program but students are encouraged to take advantage of courses in most of the general education curriculum areas of the General College—natural sciences, social sciences, business studies, humanities, and communications. Of the 45 credits required for the certificate, a minimum of 30 credits must be taken in General College courses. (A list of General College courses offered through Extension is found in the **Course Offerings** section.)

A minimum of 75 percent (34 credits) must be taken on the A-N grading system.

Students interested in pursuing a human services emphasis within the General Studies certificate should contact an Extension counselor at 373-3905.

Students wishing to continue their education toward the Associate in Arts degree from the General College will find that all credits from this program, if carefully planned, will be accepted. For AA degree requirements, see University Degree Programs; Associate in Arts (AA) on page 555. Students interested in completing the A.A. degree should contact an Extension adviser early in their certificate program.

Geriatric Pharmacy certificate

Continuing Education and Extension is now offering a Certificate in Geriatric Pharmacy program. For more information, contact Continuing Education in Pharmacy at 376-5313.

Human Services certificate

(50 credits)

General College and Continuing Education and Extension have decided to replace the CEE Human Services Certificate program with the Human Services Certificate program as offered through the General College. No further applications will be accepted to the CEE Human Services Certificate program after September 1, 1983. Students admitted to the program may continue to pursue the certificate but must complete the program by June 1990. Questions may be directed to the Extension Counseling Office, 373-3905.

The Human Services certificate was developed in response to the increasing demand for specialized certificates for paraprofessional staff in community service organizations. Paraprofessionals engaged in the human services and in community development efforts in agencies such as public and private schools, nursery schools, neighborhood health clinics, poverty agencies, housing authorities, social agencies, and community libraries may find the certificate useful for their personal development as well as their certification needs for advancing employment opportunities.

The certificate provides both background knowledge and career-related course work. Students have 30 to 34 credits of core requirements, generic to all fields of human services and a small number of credits of elective credits within the basic social sciences. The remaining 16 credits (the concentration requirement) are approved supervised work experience and/or related credits planned by the student and the counselor, depending upon student interest and job requirements. The certificate is flexible and should provide a variety of educational opportunities for the paraprofessional.

Students interested in following a degree program may, with careful planning, transfer credits earned for this certificate toward a degree in General College or the College of Liberal Arts.

Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University of Minnesota.

Students should consult an Extension counselor **before taking courses in the Concentration Requirement**. Appointments may be arranged by calling 373-3905.

Core Requirements (29-33 credits)

- GC 1421-1422 Writing Laboratory or Comp 1011 Writing Practice or Comp 1001-1002 Introductory Composition
GC 1461 Oral Communication: Basic Principles or Spch 1101 Fundamentals of Speech
GC 1471 Creative Problem Solving—Innovation Techniques
SW 1001 Introduction to Social Welfare and Community Services
GC 1283 Psychology of Human Development or Psy 1003 Application of Psychology to Living
GC 1211 People and Problems or Soc 1001 Introduction to Sociology
PubH 3001 Personal and Community Health

Concentration Requirement (GC 1627 Human Services Practicum and/or approved related courses) in one of the following fields (16 credits)

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

Electives: Additional courses from the following areas to make a minimum of 50 credits total for the certificate.

- GC 1285 Cultural Anthropology or Anth 1102 Introduction to Social and Cultural Anthropology
GC 1295 Economic Perspectives—General View
GC 1722 Home Life: Parent-Child Relationships or FSos 1025 Parenthood
Geog 1301 Human Geography
GC 1233 United States: Problems of Government or Pol 1001 American Government and Politics
GC 1281 Psychology in Modern Society or Psy 1001 General Psychology
CPsy 1301 Introductory Child Psychology
Rhet 1147 Efficient Reading
Up to 6 credits in art, music, literature, humanities, in either General College or Liberal Arts courses

Human Services certificate, General College

(46-90 credits)

See page 559 for information on the Human Services Certificate offered by the General College.

Interior Design certificate

(60 credits)

The Department of Design and Continuing Education and Extension have jointly decided to replace the Interior Design Certificate program with the Interior Design degree program as offered through the College of Home Economics. No further admissions will be accepted to the certificate program. Students already admitted to the program may continue to pursue the certificate but must complete the program by June 1988. Questions may be directed to the Extension Counseling Office, 373-3905.

A certain amount of confusion resulted in course numbering at the time of the moratorium on admissions to the certificate program. Both the students who were interested in completing the certificate and those who simply wanted the consumer emphasis found themselves registering for the same courses. To alleviate this problem the following certificate courses have been renumbered as follows: Dsgn 1455 is now 1451; Dsgn 1456 is now 1453; Dsgn 3455 is now 3451; and Dsgn 3456 is now 3453.

The Interior Design certificate is awarded upon successful completion of a program of courses in interior design and related fields. Completion of the certificate indicates a background of proficiency in the field of home furnishings and design.

Students wishing to transfer from the certificate to the degree program will need to follow the usual procedure for transfer of credit evaluation and to submit materials for portfolio review as required for all degree applicants.

All courses in the x4xx series will be used in the certificate program. All courses in the x5xx series may be used for either certificate or degree programs.

Students transferring credits to this program from other accredited institutions must take a minimum of 15 credits at the University of Minnesota.

Core Requirement (46-47 credits)

- Dsgn 1550 Drafting: Basic Drafting Techniques
- Dsgn 1451 Interior Problems I: Certificate
- Dsgn 1453 Interior Problems II: Certificate
- Dsgn 1521 Color and Design I
- Dsgn 3550 Interior Design Presentation or Dsgn 3450 Perspective and Presentation Sketches
- Dsgn 3551 Interior Design Rendering
- Dsgn 3451 Interior Problems III: Certificate
- Dsgn 3453 Interior Problems IV: Certificate
- Dsgn 3477 Contract Design Problems
- ArtH 1001 Introduction to the Visual Arts
- Comp 1011 Writing Practice or Comp 1001 Introductory Composition or Comp 0004C Business Correspondence
- Psy 1003 Application of Psychology to Living

Spread Requirement: Additional courses selected from the following groups to make a minimum of 60 credits total for the certificate.

1. History of Art, Foreign Language, Humanities, Literature, Social Sciences
2. Ceramics, Drawing and Painting, Sculpture, Printmaking, Photography
3. Dsgn 1428 Interior Design Layout
Dsgn 3412 History of Traditional Furniture
4. Dsgn 3559 or 3459 Business Procedures and Client Relationships
GC 1053 Selling Approaches and Techniques
GC 1513 Principles of Small Business Operations
Comp 0004C Business Correspondence
Spch 0001C Beginning Speech: Communication or Spch 1102 Communication in the Modern World

Legal Assistant certificate

See page 557 for information on the Legal Assistant certificate offered by the General College.

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-N 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 (5-8 credits)

Comp 1011 Writing Practice or Comp 1001-1002—Introductory Composition or equivalent

Spread 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 373-3905 for a copy of CLA courses meeting the group distribution requirements offered through Extension **before taking any courses.**

Mathematics and Science certificate (IS)

(45 credits)

A minimum of 50 percent of all course work (23 credits) must be taken on the A-N grading system.

Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University of Minnesota.

Prerequisite: 2 years of algebra and 2 years of geometry including trigonometry.

Core Requirement (25-28 credits)

Comp 1011 Writing Practice or Comp 1001-1002 Introductory Composition

Math 1211 Calculus I

Math 1221 Calculus II

Math 1231 Calculus III

Math 3211 Multivariable Calculus

Electives: Additional courses to make a minimum total of 45 credits, selected from the following areas.

Astronomy

Biology

Botany

Chemistry

Ecology

Engineering

Geology

Aerospace Engineering and Mechanics

Microbiology

Physics

Ophthalmology Technician certificate

The Ophthalmology Technician certificate was planned by the Department of Ophthalmology at the University of Minnesota and Continuing Education and Extension. The objective of the certificate program is to provide individuals with technical and mechanical skills and knowledge required in the treatment and diagnosis of eye diseases so that they may qualify for employment under the supervision of ophthalmologists as ophthalmic technicians.

Requirements for the certificate will include completion of nine months of didactic and clinical training immediately followed by a 12-month externship.

Priority will be given to applications submitted prior to June 15. For more information about the program, contact: School for Ophthalmic Technicians, St. Paul-Ramsey Medical Center, 640 Jackson Street, St. Paul, MN 55101, (612) 221-3000.

Accounting certificates

The Junior Accounting certificate program is of value to individuals in junior accounting positions in industry, to management personnel who are required to deal with common finance and accounting data, and to business people who wish to have a basic understanding of the elementary principles of accounting and corporation finance.

The courses required for the Senior Accounting certificate provide the same beginning background in accounting practice and theory that is available to students who graduate with a four-year degree with specialization in this field. The full program forms a sound background for additional study in preparation for the Certified Public Accountant examinations.

Junior Accounting certificate

(66-69 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.

Note: Students interested in pursuing the Junior Accounting Certificate must complete an Application for Admission to Certificate Programs and see an adviser in Extension Counseling after the completion of 12 credits.

Core Requirements

Comp 1011 Writing Practice or Comp 1001-1002 Introductory Composition or equivalent	Acct 3001 Managerial Accounting
Comp 1027 Expository Writing	Acct 3101 Accounting Theory and Practice I
Econ 1001, 1002 Principles of Economics	Acct 3102 Accounting Theory and Practice II
Math 1111 College Algebra and Analytic Geometry	Acct 3201 Cost Accounting
Math 1131 Finite Mathematics	DSci 1050 Elementary Managerial Statistics
Math 1142 Short Calculus	DSci 3055 Introduction to Management Sciences
Acct 1024-1025 Principles of Financial Accounting I-II	MIS 3100 Introduction to Computers and Computer Data Processing

Note: Students who are contemplating continuing toward a degree from the School of Management should consult with an Extension adviser before they begin working toward the Senior Accounting Certificate.

Senior Accounting

(92-95 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.

Note: Students interested in pursuing the Senior Accounting Certificate must complete an Application for Admission to Certificate Programs and see an adviser in Extension Counseling after the completion of 12 credits.

Core Requirements (80-83 credits)

Comp 1011 Writing Practice or Comp 1001-1002 Introductory Composition or equivalent	Acct 3101-3102 Accounting Theory and Practice I-II
Comp 1027 Expository Writing	Acct 3001 Managerial Accounting
Econ 1001, 1002 Principles of Economics	Acct 3201 Cost Accounting
Math 1111 College Algebra and Analytic Geometry	12 credits of accounting electives
Math 1131 Finite Mathematics	MIS 3099 Elementary FORTRAN
Math 1142 Short Calculus	MIS 3100 Introduction to Computers and Computer Data Processing
Acct 1024-1025 Principles of Financial Accounting I-II	DSci 1050 Elementary Managerial Statistics
	DSci 3055 Introduction to Management Science

Electives (12 credits)

BFin 3000 Finance Fundamentals	OM 3000 Introduction to Operations Management
BLaw 3058 Business Law	Tran 3054 Fundamentals of Transportation
Econ 3105 Managerial Economics	Mktg 3000 Principles of Marketing
BGS 3002 Business and Society	Mgmt 3001 Fundamentals of Management
BGS 3004 International Business	Mgmt 3004 Business Policy: Strategy Formulation and Implementation
IR 3002 Industrial Relations Systems: Labor Markets and the Management of Human Resources	
Ins 3100 Risk Management and Insurance	

Business Administration certificates

These certificate programs have been approved by the 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 administration and for those who want training or an opportunity for advancement in some specific field of business.

It is possible for a student to move from a course of study for a certificate into a program leading to a bachelor of science in business degree. Anyone who contemplates such a long-range objective should consult an Extension adviser before proceeding further so as to avoid any loss of credits or possible future rejection from the degree program.

Junior Business Administration certificate

(48-53 credits)

This certificate, requiring the satisfactory completion of 48-53 credits of course

work, is the equivalent of one academic year of full-time study. It offers a firm grounding in most of the basic fields of business administration. All of the credits received in completing the Junior Certificate are automatically credited toward a Senior Certificate and represent half of its required work load.

All courses must be taken on the A-N 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.

Note: Students interested in pursuing the Junior Business Administration Certificate must complete an Application for Admission to Certificate Programs and see an adviser in Extension Counseling after the completion of 12 credits.

Pre-management Requirement (36-41 credits)

Comp 1011 Writing Practice or Comp 1001-1002 Introductory Composition or equivalent	Acct 1024-1025 Principles of Financial Accounting I-II
Econ 1001, 1002 Principles of Economics	Math 1111 College Algebra and Analytic Geometry
DSci 1050 Elementary Managerial Statistics	Math 1131 Finite Mathematics
	Psy 1001 General Psychology

Core Requirement (12 credits)

Acct 3001 Managerial Accounting	Ins 3100 Risk Management and Insurance
Econ 3105 Managerial Economics	Tran 3054 Fundamentals of Transportation
BGS 3002 Business and Society	BFin 0001C Introduction to Investments
BGS 3004 International Business	BFin 3000 Finance Fundamentals
DSci 3055 Introduction to Management Sciences	Mktg 3000 Principles of Marketing
MIS 3100 Introduction to Computers and Computer Data Processing	BLaw 3058 Business Law
MIS 3101 Introduction to Management Information Systems	Mgmt 3001 Fundamentals of Management
IR 3002 Industrial Relations Systems: Labor Markets and the Management of Human Resources	Mgmt 3004 Business Policy: Strategy Formulation and Implementation
	Math 1142 Short Calculus
	MIS 3099 Elementary FORTRAN

Note: Students who are contemplating continuing toward a degree from the School of Management should consult with an Extension adviser before they begin working toward the Senior Business Administration certificate.

Senior Business Administration certificate

(90 credits)

The Senior Business Administration certificate is a continuation of the Junior 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.

Note: Student interested in pursuing the Senior Business Administration Certificate must complete an Application for Admission to Certificate Programs and see an adviser in Extension Counseling after the completion of 12 credits.

Pre-management Requirement (41-46 credits)

Comp 1011 Writing Practice or Comp 1001-1002 Introductory Composition or equivalent	DSci 1050 Elementary Managerial Statistics
Econ 1001, 1002 Principles of Economics	Math 1111 College Algebra and Analytic Geometry
Acct 1024-1025 Principles of Financial Accounting I-II	Math 1131 Finite Mathematics
	Math 1142 Short Calculus
	Psy 1001 General Psychology

Core Requirement (24 credits)

Acct 3001 Managerial Accounting	Mktg 3000 Principles of Marketing
Econ 3105 Managerial Economics	BLaw 3058 Business Law
OM 3000 Introduction to Operations Management	IR 3002 Industrial Relations Systems: Labor Markets and the Management of Human Resources
DSci 3055 Introduction to Management Sciences	Ins 3100 Risk Management and Insurance
MIS 3100 Introduction to Computers and Computer Data Processing	Tran 3054 Fundamentals of Transportation
MIS 3101 Introduction to Management Information Systems	Mgmt 3001 Fundamentals of Management
BFin 0001C Introduction to Investments	Mgmt 3004 Business Policy: Strategy Formulation and Implementation
BFin 3000 Finance Fundamentals	MIS 3099 Elementary FORTRAN
BCS 3002 Business and Society	
BCS 3004 International Business	

Electives in the School of Management: At least 16 additional credits in courses in business administration. These may be selected from the core group above or from other courses.

Other Electives: Non-business courses from areas such as physical and biological science, man and society, and artistic expression to make a minimum of 90 credits for the certificate.

Credit and Financial Management certificate

(63-66 credits)

The Credit and Financial Management certificate program was developed cooperatively by Continuing Education and Extension, the School of Management of the University of Minnesota, and the North Central Credit and Financial Management Association. The program is directed to students seeking careers in trade credit management, commercial bank and finance company loan management, and senior executive positions in financial management.

Specialized training and skills are necessary in the administration of accounts receivable in today's business. The trade credit manager must often function as an adviser to customers. 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-N grading system except Composition and Speech, which may be taken S-N. Students transferring credits to this program from other accredited institutions must take a minimum of 16 credits at the University of Minnesota.

Note: Students interested in pursuing the Credit and Financial Management Certificate must complete an Application for Admission to Certificate Programs and see an adviser in Extension Counseling after the completion of 12 credits.

For more information about working toward the certificate program, contact Extension Counseling, 373-3905.

Completion of the certificate qualifies the student for the Associate and Fellow Awards of the National Institute of Credit. Persons interested in more information about these credentials should telephone or write Lois M. Finn, City Place Building, Suite 600, 730 Hennepin Ave., Minneapolis, MN 55403, telephone (612) 341-9615.

Core Requirement (55-58 credits)

Acct 1024-1025 Principles of Financial Accounting I-II	IR 0001C Supervision I: Elements of Supervision
Acct 3001 Managerial Accounting	Mgmt 3002 Psychology in Management
Acct 3160 Analysis of Financial Statements	Mktg 3000 Principles of Marketing
BLaw 3058-3078, 3088 Business Law	GC 1764 or 1548 Credits and Collections
Econ 1001, 1002 Principles of Economics	Comp 0004C Business Correspondence or GC 3531 Business Writing
BFin 0002C Credit and Financial Management Problems*	Spch 0001C Beginning Speech—Communication

*This course is not offered every year, so students are urged to take it early in the program after completing the required prerequisites.

Electives (8 credits)

Acct 3101 Accounting Theory and Practice I	BFin 3100 Financial Management
Acct 3201 Cost Accounting	Ins 3100 Risk Management and Insurance
Econ 3751 Money and Banking	Mgmt 3001 Fundamentals of Management
BFin 0001C Introduction to Investments	Tran 3054 Fundamentals of Transportation
BFin 3000 Finance Fundamentals	

Industrial Relations certificate

(45 credits)

This program of study is arranged and coordinated by the Department of Industrial Relations of the 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 M.A. and Ph.D. programs. See **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: Students interested in pursuing the Industrial Relations Certificate must complete an Application for Admission to Certificate Programs and see an adviser in Extension Counseling after the completion of 12 credits.

Core Requirement (33 credits)

Econ 1001, 1002 Principles of Economics	IR 3010 Human Relations and Applied Organization Theory
IR 3002 Industrial Relations Systems: Labor Markets and the Management of Human Resources	Psy 1001 General Psychology
IR 3007 Collective Bargaining Negotiations and Modern Labor Relations	Psy 3801 Introduction to Statistical Methods
	Soc 1001 Introduction to Sociology

Electives (12 credits)

Econ 3501 and 5531 Labor Economics	Psy 5501 Vocational Psychology
Econ 5534 Economic Security	Psy 5701 Personnel and Industrial Psychology
Econ 5537 Labor Market Behavior and Regulation	Psy 5703 Psychology of Organizational Training and Development
Econ 5541 Contemporary Labor Issues	DSci 3055 Introduction to Management Sciences
Econ 5561 Wages and Employment	Soc 5201 Introduction to Social Psychology
IR 0007C The Minnesota Occupational Safety and Health Act	Soc 5411 Formal Organizations
IR 0001C, 0002C Supervision I, II	IEOR 0101C Industrial Engineering Management
IR 3000 Topics in Industrial Relations	IEOR 0102C Scientific Analysis of Work Methods
MIS 3101 Introduction to Management Information Systems	IEOR 0408C, 0409C Corporate Standard Data I, II
GC 1081 Personnel Selection for Non-Professionals	Mgmt 3002 Psychology in Management
Psy 3124 Psychology of Individual Differences	
Psy 3011 Introduction to the Psychology of Learning	

Information Systems Analysis and Design certificate

(54-56 credits)

The Information Systems Analysis and Design certificate program was developed cooperatively by Continuing Education and Extension, the School of Management, and leading Minnesota firms. The program is directed toward students planning careers in information processing and toward those already working in the field who wish to improve their skills. The course sequence is arranged so that it is applicable to students entering with a high school or vocational-technical school diploma and to students who have completed college degrees.

Beginning with introductory computer programming courses, the student works toward the development of analysis and design skills useful in the field of management information systems and information processing. The Information Systems Analysis and Design Certificate program provides education and training

which can open the way to responsible positions in computer information processing.

Students transferring credits to this program from other accredited institutions must take a minimum of 15 credits at the University of Minnesota.

Note: Students interested in pursuing the Information Systems Analysis and Design Certificate must complete an Application for Admission to Certificate Programs and see an adviser in Extension Counseling after the completion of 12 credits.

Students deficient in mathematics should take MIS 0140C, Mathematical Foundations of Systems Analysis, prior to the certificate courses.

Students with no computer experience or training should take MIS 3040, Organizational Use of Computers, before beginning the certificate courses.

Core Requirement (22 credits)

MIS 3100 Introduction to Computers and Computer Data Processing
Acct 1024-1025 Principles of Financial Accounting I-II
Acct 3001 Managerial Accounting
DSci 1050 Elementary Managerial Statistics
Mgmt 3001 Fundamentals of Management

Programming Requirement (6 credits)

Persons with prior programming experience or course work may contact Extension Counseling, 373-3905, about waiving the programming requirements and credit transfer.

MIS 3098 Elementary COBOL
MIS 3099 Elementary FORTRAN
MIS 5098 Intermediate COBOL

Concentration Requirement (28 credits)

MIS 3101 Introduction to Management Information Systems
MIS 5102 Introduction to Information Systems Analysis
MIS 5103 Data Structures and File Processing
MIS 3131 Database Management Systems
MIS 3132 Data Communication Systems
MIS 3151 Administration and Control of Management Information Systems
DSci 3055 Introduction to Management Science

Management of Administrative Services certificates

The Management of Administrative Services certificate program has been developed by Continuing Education and Extension in cooperation with the School of Management and the Administrative Management Society.

These university-level certificate programs are designed especially for those management employees who have not received such training in schools of business or commerce, in order to assist them in becoming more competent in their present positions and to improve their opportunities for advancement. In completion of the prescribed programs, the student may be entitled to certificates of the Administrative Management Society. Persons interested in the latter certificates may telephone or write Karen Henningsen, Economics Laboratory, Inc., 370 Wabasha, St. Paul, MN 55102, telephone 293-2233.

Associate in Management of Administrative Services certificate

(51-55 credits)

Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits of business courses at the University of Minnesota.

Note: Students interested in pursuing the Associate in Management of Administrative Services Certificate must complete an Application for Admission to Certificate Programs and see an adviser in Extension Counseling after the completion of 12 credits.

Core Requirement (47-51 credits)

Comp 1011 Writing Practice or Comp 1001 Introductory Composition or Comp 0003C Review of Business English or Comp 0004C Business Correspondence, or equivalent	Math 1131 Finite Mathematics
Econ 1001, 1002 Principles of Economics	BLaw 3058 Business Law
Acct 1024-1025 Principles of Financial Accounting I-II	MIS 3098 Elementary COBOL or MIS 3099 Elementary FORTRAN
Acct 3001 Managerial Accounting	MIS 3100 Introduction to Computers and Computer Data Processing
Math 1111 College Algebra and Analytic Geometry	Psy 1001 General Psychology
	Psy 3801 Introduction to Statistical Methods or DSci 1050, Elementary Managerial Statistics

Electives: Additional courses to be selected from the list of requirements or electives for the senior certificate to make a minimum of 51-55 credits total for the certificate.

Note: Students contemplating continuing toward a degree in the School of Management should consult with an Extension adviser before they begin working toward the Fellow in Management of Administrative Services Certificate.

Fellow in Management of Administrative Services Certificate

(90-94 credits)

Students transferring credits to this program from other accredited institutions must take a minimum of 24 credits of business courses at the University of Minnesota.

Note: Students interested in pursuing the Fellow in Management of Administrative Services Certificate must complete an Application for Admission to Certificate Programs and see an adviser in Extension Counseling after the completion of 12 credits.

Core Requirement (51-54 credits)

GC 3531 Writing for Business and the Professions and Comp 0004C Business Correspondence or Comp 1011 Writing Practice or Comp 1001-1002 Introductory Composition or equivalent	BLaw 3058 Business Law
Econ 1001, 1002 Principles of Economics	MIS 3098 Elementary COBOL or MIS 3099 Elementary FORTRAN
Acct 1024-1025 Principles of Financial Accounting I-II	MIS 3100 Introduction to Computers and Computer Data Processing
Acct 3001 Managerial Accounting	Math 1131 Finite Mathematics and Math 1111 College Algebra and Analytic Geometry
	Psy 1001 General Psychology
	Psy 3801 Introduction to Statistical Methods or DSci 1050, Elementary Managerial Statistics

Group Requirements (36 credits)

Group I—At least four courses from the following (16 credits):

IR 3002 Industrial Relations Systems: Labor Markets and the Management of Human Resources	BFin 3000 Finance Fundamentals Ins 3100 Risk Management and Insurance Mktg 3000 Principles of Marketing
Mgmt 3002 Psychology in Management	
BFin 0001C Introduction to Investments	

Group II—At least five courses from the following (20 credits):

BFin 3100 Financial Management	Acct 3201 Cost Accounting
Tran 3054 Fundamentals of Transportation	Mgmt 3001 Fundamentals of Management BLaw 3088 Business Law
Acct 3160 Analysis of Financial Statements	
IR 3010 Human Relations and Applied Organization Theory	

Electives: Additional courses from the following list of courses or areas to make a minimum of 90-94 credits total for the certificate.

IR 0001C, 0002C Supervision I, II	Marketing
Psy 5751 Psychology of Advertising	Real Estate
Accounting	Transportation
Economics	English
Finance	Humanities
Production	Social Science
Management	Speech
Industrial Relations	
Insurance	

Real Estate certificate

(30 credits)

The Real Estate Education Program prepares individuals to make decisions concerning a variety of issues in several fields of real estate practice. Graduates are employed in the private sector in real estate brokerage, financial appraisal, real estate investment consulting, property development, property management, and corporate real estate. In the public sector there is a demand for professionals in land use planning, property tax assessment, public housing agencies, and several other governmental agencies concerned with housing, property acquisition, management, and development issues.

The Real Estate Education Program offers a unique blend of resources to University students and practicing real estate professionals. Several seminars and workshops are also offered on a variety of topics addressing the changing needs of real estate practitioners and of the industry.

Courses and seminars within the Real Estate Education program are approved by the Commissioner of Commerce for application toward the licensing requirements under Minnesota Statute, Section 82.22. The University also regularly administers accreditation courses and examinations of the American Institute of Real Estate Appraisers, Society of Real Estate Appraisers, the Institute of Real Estate Management, Minnesota Chapter of the International Association of Assessing Officers, and the Minnesota Board of Assessors.

For information on Real Estate degree opportunities (Associate in Arts, A.A.; Bachelor of General Studies, B.G.S.; and Bachelor of Applied Studies, B.A.S.), internship, directed studies, and financial aid, contact the Real Estate Education Program Office, 337 Nolte Center, 315 Pillsbury Drive S.E., University of Minnesota, Minneapolis, MN 55455; (612) 376-8846.

Admission

Students planning to complete a degree or certificate in real estate should contact the Real Estate Education Program office, or an Extension adviser (314 Nolte Center; 373-3905), at an early date and apply for admission upon completing 12 credits in real estate.

Course Requirements

Students are required to complete all initial and concentration Real Estate courses. Courses taken at other institutions may be transferred into the program.

Initial Requirements (6 credits)

- RE 0801C Introduction to Real Estate, Course I
- RE 0802C Introduction to Real Estate, Course II
- or
- RE 0803C Introduction to Real Estate, Courses I and II

Concentration Requirement (16 credits)

- RE 0804C Real Estate Property Management
- RE 0806C Real Estate Marketing
- RE 0807C Real Estate Law I
- RE 0808C Principles of Real Estate Finance
- RE 0901C An Introduction to Appraising Real Property

Elective/Specialization (At least 8 credits selected from the following)

- RE 0700C An Introduction to Real Estate Careers
- RE 0805C Community Association Management
- RE 0809C Housing Alternatives: Condominiums, Townhouses, and Cooperatives
- RE 0810C Real Estate Investment Analysis
- RE 0811C Residential Energy Conservation for Real Estate Practice
- RE 0812C Housing Inspection
- RE 0813C Real Estate Development
- RE 0815C Taxation of Property
- RE 0816C Directed Study
- RE 0902C Applied Residential Property Valuation
- RE 0903C Principles of Income Property Appraising
- RE 0822C Business Site Selection and Analysis
- RE 0827C Corporate Real Estate Administration
- RE 0828C Property Insurance and Financial Planning Techniques for Real Estate Practice
- RE 0829C Real Estate Law II
- RE 0904C Applied Income Property Valuation

Undergraduate Development certificates

(UDC Series in Engineering and Science)

The technical progress of American industry has reached its high level of

production through engineering teamwork. The engineering team is a three-part team:

- a. Engineers and scientists who formulate ideas and create new products and services.
- b. Engineering technicians who help develop, test, and apply these ideas and creations.
- c. Skilled workers who make the products and perform routine services.

It is the responsibility of our colleges and universities to provide training opportunities for persons capable of becoming professional engineers, scientists and engineering technicians. Vocational and trade schools have the responsibility of training the skilled worker.

The Department of Extension Classes of Continuing Education and Extension offers a variety of certificates for the part-time student who has the ability to carry college-level courses leading to a career both at the engineer and engineering technician level. Interested students should study these certificate programs carefully and select the program best suited to their interests, abilities, present and future employment, and ultimate educational goal.

The UDC 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 Extension Counseling Office, telephone 373-3905, 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 Extension Counseling and the Department of Computer Science.

The UDC in Computer Science—45 credits can represent a first step for a student with college-level ability into a field of technical and scientific computer application. It can also provide a means of broadening the perspectives and skills of persons already employed at the programmer or technician level.

Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University of Minnesota.

Core Requirement (24-27 credits)

Math 1311-1321-1331 Computer

Calculus I-II-III or

Math 1211-1221-1231 Calculus I-II-III

Comp 1011 Writing Practice or

Comp 1001-1002 Introductory

Composition or equivalent

CSci 3400 Discrete Structures of
Computer Science

Concentration Requirement (17 credits)

CSci 3104 Introduction to Programming
and Problem Solving

CSci 3105, 3106 Fundamentals of
Algorithms and Languages I-II

CSci 3107 Introduction to the
Structures and Programming

of Computer Systems or

CSci 5101 Introduction to the

Structures and Programming

of Software Systems I

Electives

††Nontechnical electives to make a minimum of 45 credits for the certificate.

Undergraduate Development Certificate in Computer Science—90 credits

This certificate continues the development of the undergraduate core curriculum begun in the Undergraduate Development Certificate in Computer Science—45 credits. The CSci courses provide a base for later specialization while related technical electives give exposure to at least one technical discipline of particular interest to the student.

If a student's objective is an undergraduate degree, planning of the completion of this certificate should include early consultation with a CSci adviser 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, including those taken for the UDC in Computer Science—45 credits.

Prerequisite: Completion of the UDC in Computer Science—45 credits.

Core Requirement (17 credits)

Math 3211 Multivariable Calculus

Math 3142 or 3221 Introduction to
Linear Algebra

Math 3091 Elementary Probability and
Statistics with Applications or

Stat 3091 Introduction to Probability
and Statistics

CSci 5102 Structure and Programming
of Software Systems II

††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).

Concentration Requirement (12 credits)

Any 12 credits in 3000 or 5000 courses in computer science.

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 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 (8 credits)

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 at the University of Minnesota.

Prerequisite: High school graduate or equivalent; 2 years of algebra and 2 years of geometry, including trigonometry.

Core Requirement (34-37 credits)

Math 1211 Calculus I

Math 1221 Calculus II

Math 1231 Calculus III

ME 1025 Engineering Graphics; or CSci

3101 A FORTRAN Introduction to
Computer Programming

Phys 1271-1275-1281-1285 General
Physics and Lab

Comp 1011 Writing Practice or

Comp 1001-1002 Introductory
Composition or equivalent

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

††Institute of Technology nontechnical electives may be chosen from the following fields: anthropology, art, biological sciences, botany, classics, economics, geography, history, humanities, languages (except scientific language courses), literature, music theory, philosophy, political science, psychology, religion, social science, sociology, speech, zoology and others (see the current I.T. bulletin).

Undergraduate Development Certificate in Engineering and Science—90 credits

(Includes 45 credits from Undergraduate Development Certificate in Engineering and Science)

This certificate is designed for students who have an engineering degree objective and who wish to continue working toward one of the engineering curriculums of the Institute of Technology. It will also be of value to technicians who desire to widen and deepen their technical role.

This approach involves interweaving into one expanding pattern the elements of basic science, engineering science, professional engineering work, and design. To build the sound foundation required in engineering work, the first two years of all engineering curriculums emphasize the basic sciences of mathematics, physics, and chemistry.

Work in nontechnical and biological science electives is also required throughout the entire engineering program. This is intended to broaden viewpoints and to add to perspective.

All classes in the UDC in Engineering and Science—90 credits carry degree credit and are transferable to the Institute of Technology when admission requirements are satisfied. Refer to the introductory statement on the UDC at the beginning of this section.

Students transferring credits to this program from other accredited institutions must take a minimum of 24 credits at the University of Minnesota, including those taken for the UDC in Engineering and Science—45 Credits.

Prerequisite: Completion of the UDC in Engineering and Science—45 credits.

Core Requirement (25 credits)

Math 3211 Multivariable Calculus
Math 3221 Introduction to Linear Algebra
and Linear Differential Equations

Phys 1291-1295 General Physics and
Laboratory
Chem 1004-1005† General Principles of
Chemistry

Spread Requirement: A minimum of 8 credits from the following courses

Math 3231 Vector Analysis
AEM 1015 Statics
AEM 3016 Deformable Body Mechanics
AEM 3036 Dynamics
EE 3009 Linear Circuits I

EE 1400 Circuits Laboratory
CE 3400 Fluid Mechanics
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).

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, including those taken for the UDC in Engineering and Science—45 credits.

Prerequisite: Completion of the UDC in Engineering and Science—45 credits.

Core Requirement (25 credits selected from the following)

Math 3211	Multivariable Calculus	Phys 1291-1295	General Physics and Laboratory
Math 3221	Introduction to Linear Algebra and Linear Differential Equations	AEM 1015	Statics
Chem 1004-1005† or 1031-1032	General Principles of Chemistry	AEM 3016	Deformable Body Mechanics
		AEM 3036	Dynamics
		CE 3400	Fluid Mechanics

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

CE 3100	Introduction to Surveying and Mapping
CE 3200	Introduction to Transportation Engineering
CE 3300	Elements of Soil Mechanics
CE 3400	Fluid Mechanics (if not taken in core requirement)
CE 3500	Introduction to Environmental Engineering Problems and Analysis
CE 5405	Hydrology and Hydrologic Design
CE 5603	Introduction to Construction Materials

Undergraduate Development Certificate in Electrical Engineering—90 credits

(Includes 45 credits from Undergraduate Development Certificate in Engineering and Science)

The Undergraduate Development Certificate in Electrical Engineering—90 credits enables a student to continue the Undergraduate Development Certificate work in mathematics and physics with an opportunity to choose technical elective courses at the third-year level of an electrical engineering curriculum. It is designed to help engineering technicians assume a role of increased responsibility in working with electrical engineers. It also represents a coherent body of study in helping determine whether further work toward an electrical engineering degree should be pursued. Upon acceptance by the Institute of Technology, a student may transfer

appropriate work completed in a certificate program to a bachelor's degree program.

Students transferring credits to this program from other accredited institutions must take a minimum of 24 credits at the University of Minnesota, including those taken for the UDC in Engineering and Science—45 credits.

Prerequisite: Completion of the UDC in Engineering and Science—45 credits.

Core Requirement (minimum of 36 credits selected from the following)

Math 3211	Multivariable Calculus	Phys 1291-1295	General Physics and Laboratory
Math 3221	Introduction to Linear Algebra and Linear Differential Equations		
Math 3231	Vector Analysis		Third-Year Electrical Engineering courses (3000-5000 level)
EE 1400	Circuits Laboratory		
EE 3009	Linear Circuits I		
EE 3010	Linear Circuits II		

Electives: Courses from nontechnical or biological science electives††, to make a minimum of 90 credits, including those from the UDC in Engineering and Science—45 credits.

Undergraduate Development Certificate in Electrical Engineering—135 credits

(Includes 90 credits from Undergraduate Development Certificate in Electrical Engineering)

An increasing number of employers are recognizing the value of an individual who has completed the course work that is central to the third year of an electrical engineering bachelor's program together with supporting topics. The objective may either be demonstration of ability to participate more actively in the engineering team or in some cases arrangements may be made upon completion of this certificate for the individual to pursue the remainder of the work toward a Bachelor of Electrical Engineering Degree on an accelerated basis. Course sequences at the fourth-year level may also serve either of the above two purposes.

Students transferring credits to this program from other accredited institutions must take a minimum of 36 credits at the University of Minnesota, including those taken for the UDC in Electrical Engineering—90 credits.

Prerequisite: Completion of the UDC in Electrical Engineering—90 credits.

††Institute of Technology nontechnical electives may be chosen from the following fields: anthropology, art, biological sciences, botany, classics, economics, geography, history, humanities, languages (except scientific language courses), literature, music theory, philosophy, political science, psychology, religion, social science, sociology, speech, zoology and others (see the current I.T. bulletin).

Core Requirement (minimum of 30 credits selected from the following)

EE 3011	Signal Analysis	EE 3111	Electromagnetic Waves
EE 3012	System Design	EE 3351	Introduction to Logic Design and Microprocessors
EE 3060	Semiconductor Devices	EE 3352	Microprocessors
EE 3061	Analog Electronics	EE 3400-3401-3402	Junior Electrical Engineering Laboratory
EE 3062	Digital Electronics	Comp 3031	Technical Writing for Engineering
EE 3110	Electric and Magnetic Fields		Any other EE 5000-level courses

NOTE: Students working toward a degree should check with an I.T. adviser before choosing technical electives.

Electives: Courses from nontechnical (maximum 6 credits)†† or technical electives (including fourth-year courses in electrical engineering) to make a minimum of 135 credits for the certificate.

Undergraduate Development Certificate in Industrial Engineering—90 credits

(Includes 45 credits from Undergraduate Development Certificate in Engineering and Science)

The Undergraduate Development Certificate in Industrial Engineering—90 credits enables a student to continue the Undergraduate Development Certificate work in courses normally required in industrial engineering degree programs and establishes the prerequisite work needed to pursue courses at the third-year level. It is designed to help engineering technicians assume a role of increased responsibility in working with industrial engineers. It also represents a coherent body of study in helping determine whether further work toward an industrial engineering degree should be pursued. Upon acceptance by the Institute of Technology a student may transfer appropriate work completed in a certificate program to a bachelor's degree program.

Students transferring credits to this program from other accredited institutions must take a minimum of 24 credits at the University of Minnesota, including those taken for the UDC in Engineering and Science—45 credits.

Prerequisite: Completion of the UDC in Engineering and Science—45 credits.

Core Requirement (26 credits)

CSci 3101	A FORTRAN Introduction to Computer Programming
Math 3221	Introduction to Linear Algebra Equations and Linear Differential Equations
Stat 3091	Probability and Statistics or
ME 3900	Introduction to Engineering Statistics
IEOR 5000	Introduction to Industrial Engineering Analysis
Comp 3031	Pre-Professional Writing for Engineering
Phys 1291-1295	General Physics and Laboratory

††Institute of Technology nontechnical electives may be chosen from the following fields: anthropology, art, biological sciences, botany, classics, economics, geography, history, humanities, languages (except scientific language courses), literature, music theory, philosophy, political science, psychology, religion, social science, sociology, speech, zoology and others (see the current I.T. bulletin).

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 including IEOR 0101C, 0102C, and 0103C.

Note: Prerequisites and course overlap between certificate and degree credit courses should be evaluated by an I.T. adviser.

Undergraduate Development Certificate in Mechanical Engineering—94-96 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 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, 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 (42 credits)

- CSci 3101 A FORTRAN Introduction to Computer Programming
- Math 3221 Introduction to Linear Algebra and Linear Differential Equations
- AEM 1015 Statics
- AEM 3016 Deformable Body Mechanics
- AEM 3036 Dynamics
- Phys 1291-1295 General Physics and Laboratory
- ME 3201 Mechanical Engineering Systems Analysis
- ME 3203 Analysis of Mechanism Systems or
ME 3205 Engineering Systems Design
- ME 3301 Thermodynamics
- ME 3303 Applied Thermodynamics or
ME 5342 Heat Transfer

Electives: Additional electives from the following courses to make a minimum of 94-96 credits including credits from UDC in Engineering and Science—45 credits.

- ME 3205 Engineering Systems Design
- ME 5342 Heat Transfer
- ME 5344 Thermodynamics of Fluid Flow

Note: ME 1025 Engineering Graphics or accepted equivalent is required if not already taken in the UDC Engineering and Science—45 credits.

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 0998C	Certificate credit course
0000 to 0998	Noncredit course
1000 to 1998	Introductory degree-credit course—primarily for freshmen and sophomores
3000 to 3998	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 5998	Advanced degree credit course—primarily for juniors, seniors, and graduate-level students
8000 to 8998	Degree credit course open only to students who have been <i>admitted</i> to the University of Minnesota Graduate School

To take a course beginning with the numeral 5 (indicating a degree credit course intended primarily for juniors, seniors, and graduate students) or beginning with the numeral 8 (indicating a course intended only for students *admitted* to the University of Minnesota Graduate School) for graduate credit, see **graduate credit**, page 44.

Symbols

The following symbols are used throughout this Bulletin:

- A hyphen between numbers indicates a sequence course, the units of which must be taken in order, unless otherwise indicated.
- ★ Enrollment space limited. See instructions on registration in *limited-enrollment* classes and sections, page 20. Limited-enrollment classes or sections are printed in red in this **Bulletin**.
- ⓪ 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 Extension Independent Study.
- ◆ Regular credit course open for registration on a reduced, no-credit, tuition plan (see page 48).
- △ Consent of division, department, or school offering course is required.

cr Credit

Qtr Quarter

Sem Semester

Spec Special Term

S/N Satisfactory/No credit grading system. See page 42.

A/N Letter grading system. See page 42.

Lect Lecture

Rec Recitation

Prereq Prerequisite. See page 41

Sec Section

Equiv Equivalent

Grad Graduate

Department abbreviations, course designators

Acct, Accounting	Dnce, Dance
AdPy, Adult Psychiatry	Dan, Danish
AEM, Aerospace Engineering and Mechanics	DSci, Decision Sciences
Afro, Afro-American and African Studies	Dsgn, Design
Agri, Agriculture	Dtch, Dutch
AgEc, Agricultural and Applied Economics	EAS, East Asian Studies
Agro, Agronomy and Plant Genetics	EBB, Ecology and Behavioral Biology
Amln, American Indian Studies	Econ, Economics
AmSt, American Studies	Educ, Adult and Teacher Education
Anat, Anatomy	EdAd, Educational Administration
ANEJ, Ancient Near Eastern and Jewish Studies	EPsy, Educational Psychology
AnSc, Animal Science	EE, Electrical Engineering
Anth, Anthropology	Elem, Elementary Education
Arab, Arabic	Engl, English
Arch, Architecture	ESL, English as a Second Language
ArEd, Art Education	Ent, Entomology
ArtH, Art History	FPAAd, Family Planning Administration
ArtS, Art, Studio	FPCH, Family Practice and Community Health
Ast, Astronomy	FSoS, Family Social Science
BioC, Biochemistry	BFin, Finance (business)
Biol, Biology	Fin, Finnish
Bot, Botany	FW, Fisheries and Wildlife
BFin, Finance	FScN, Food Science and Nutrition
BME, Business and Marketing Education	FoSt, Foreign Study
BGS, Business, Government, and Society	ForP, Forest Products
BLaw, Business Law	FR, Forest Resources
Chem, Chemistry	Fren, French
Chic, Chicano Studies	Frlt, French and Italian
CAPy, Child and Adolescent Psychiatry	GC, General College
CPsy, Child Psychology	GCB, Genetics and Cell Biology
Chn, Chinese	GeoE, Geo-Engineering
CE, Civil and Mineral Engineering	Geog, Geography
Clas, Classics	Geo, Geology and Geophysics
CVM, College of Veterinary Medicine	Ger, German
CDis, Communication Disorders	Grk, Greek
CLit, Comparative Literature	Hebr, Hebrew
Comp, English Composition	HiEd, Higher Education
CSci, Computer Science	Hndi, Hindi
CEW, Continuing Education for Women	Hist, History
CISy, Curriculum and Instructional Systems	Hlth, School Health Education
	HMed, History of Medicine
	Hort, Horticultural Science
	HSci, History of Science and Technology
	HSU, Health Science Units
	Hum, Humanities

IC, *Informal Courses*
 IEOR, *Industrial Engineering/Operations Research*
 IR, *Industrial Relations*
 IofT, *Institute of Technology*
 ID, *Interdepartmental Study*
 Ins, *Insurance*
 IIA, *Insurance Institute of America*
 CFP, *Certified Financial Planner*
 EBS, *Employee Benefits Specialist*
 HS, *Chartered Life Underwriter (CLU) and Chartered Financial Consultant (ChFC)*
 Ital, *Italian*
 Jpn, *Japanese*
 JwSt, *Jewish Studies*
 Jour, *Journalism and Mass Communication*
 LMed, *Laboratory Medicine*
 LA, *Landscape Architecture*
 LAS, *Latin American Studies*
 Lat, *Latin*
 Ling, *Linguistics*
 MacP, *MacPhail Center Courses*
 Math, *Mathematics*
 MatS, *Metallurgy/Materials Science*
 Mgmt, *Management*
 MIS, *Management Information Systems*
 Mktg, *Marketing*
 MthE, *Mathematics Education*
 ME, *Mechanical Engineering*
 MicB, *Microbiology*
 MESA, *Middle Eastern and South Asian Studies*
 Mil, *Military Science*
 MdGk, *Modern Greek*
 Mus, *Music*
 MuEd, *Music Education*
 NSci, *Natural Science and Technology*
 Nor, *Norwegian*
 Nurs, *Nursing*
 OM, *Operations Management*
 Per, *Persian*
 PO, *Personal Orientation*
 Phar, *Pharmacy*
 Phil, *Philosophy*
 PE, *Physical Education*
 PMed, *Physical Medicine and Rehabilitation*
 Phcg, *Pharmacognosy*
 Phys, *Physics*
 Phsl, *Physiology*
 PIPa, *Plant Pathology*
 Plsh, *Polish*
 Pol, *Political Science*
 Port, *Portuguese*
 PIC, *Professional Improvement Courses*
 Psy, *Psychology*
 PA, *Public Affairs*
 PubH, *Public Health*
 RE, *Real Estate*
 Rec, *Recreation, Park and Leisure Studies*
 RelS, *Religious Studies*
 Rhet, *Rhetoric*
 Russ, *Russian*
 Scan, *Scandinavian*
 Hlth, *School Health Education*
 SeEd, *Secondary Education*
 Slav, *Slavic*
 SPFE, *Social and Philosophical Foundations of Education*
 SW, *Social Work*
 Soc, *Sociology*
 Soil, *Soil Science*
 SoAS, *South Asian Studies*
 Span, *Spanish and Portuguese*
 Spch, *Speech-Communication*
 Stat, *Statistics*
 Swed, *Swedish*
 TexC, *Textiles and Clothing*
 Th, *Theatre Arts*
 Tran, *Transportation and Business Logistics*
 UrbS, *Urban Studies*
 CVM, *College of Veterinary Medicine*
 WoSt, *Women's Studies*
 YoSt, *Youth Development and Research (Youth Studies)*

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 the Disabled Students Counseling and Information Office, 373-3714, and ask for the "Guide to the Handicapped." 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*
Agr(StP), *Agronomy*
AkerH, *Akerman Hall*
ApH, *Appleby Hall*
AlderH (StP), *Alderman Hall*
AmundH, *Amundson Hall*
AndH, *Anderson Hall*
AnScVM (StP), *Animal Science/Veterinary Medicine*
Arch, *Architecture*
Armory, *Armory Bldg.*
ArtB, *Art Building (2020 Washington Ave. So., Minneapolis)*
BellMus, *Museum of Natural History*
BFAB, *Bierman Field Athletic Bldg.*
BioSci(StP), *Biological Sciences Center*
BlegH, *Blegen Hall*
Botany, *Botany*
Botany B, *Botany (basement)*
BuH, *Burton Hall*
ChDev, *Child Development*
CookeH, *Cooke Hall (1900 University Avenue S.E.)*
ChRC, *Children's Rehabilitation Center*
CivMinE, *Civil and Mineral Engineering*
CMU, *Coffman Memorial Union*
ClaOff (StP), *Classroom Office Building*
CofH(StP), *Coffey Hall*
DiehlH, *Diehl Hall*
DinC(StP), *Dining Center*
Dome City (1507 University Avenue S.E.)
EBCEC (StP) *Earle Brown Continuing Education Center*
EddyH, *Eddy Hall*
EdHAn, *Eddy Hall Annex*
ElectE, *Electrical Engineering*
ElthH, *Elliott Hall*
ExpE, *Experimental Engineering*
FieldHse, *University Field House (1800 University Avenue S.E.)*
FolH, *Folwell Hall*
FordH, *Ford Hall*
FronH, *Frontier Hall*
FraserH, *Fraser Hall*
FScN(StP), *Food Science and Nutrition*
GorL (StP), *Gortner Laboratory of Biochemistry*
GrnH (StP), *Green Hall*
Gym (StP), *Gymnasium (St. Paul campus)*
HckrH(StP), *Haecker Hall*
HS (StP), *Health Service (St. Paul campus)*
HodsonH (StP), *Hodson Hall*
HolB, *Holman Building (2035 University Ave.)*
HrG(StP), *Horticulture Greenhouse*
HSUnitF, *Health Sciences Unit F*
JacH, *Jackson Hall*
JOAd, *Jackson-Owre Addition*
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*
MdbH, *Middlebrook Hall*

Mgmt/Econ,
 Management/Economics
 Bldg (formerly BA, Business
 Administration)
 MinMet, Mines & Metallurgy
 MlrdH, Millard Hall
 MMA, Mayo Memorial Auditorium
 MRRC, Mineral Resources
 Research Center
 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
 NorH(StP), North Hall
 OMWL, O Meredith Wilson
 Library
 OwreH, Owre Hall
 PalmC (StP), Palmer Classroom
 Building
 PeikH, Peik Hall
 PetH (StP), Peters Hall
 Phys, Physics, Tate Laboratory of
 PillsH, Pillsbury Hall
 PiH, Pioneer Hall
 PolDB, Police Department Bldg.
 PtH, Pattee Hall
 PWB, Phillips Wangenstein Bldg.
 RarigC, Rarig Center
 ScottH, Scott Hall
 SciCB, Science Classroom Bldg.
 ShevH, Shevlin Hall
 SmithH, Smith Hall
 SnH (StP), Snyder Hall
 Soils (StP), Soils
 SocSci, Social Sciences Bldg.
 Stad, Stadium
 StakH(StP), Stakman Hall of Plant
 Pathology
 StCen (StP), Student Center
 TNCE, Temporary, North Court of
 Engineering
 TNA, Temporary, North of
 Appleby
 TerH, Territorial Hall
 VetS (StP), Veterinary Science
 VinH, Vincent Hall
 WaLib, Walter Library
 WesH, Westbrook Hall
 WilleyH, Willey Hall
 WmsonH, Williamson Hall
 WullH, Wulling Hall
 Zoology, Zoology

Abbreviations for off-campus classes

The following abbreviations for off-campus class sites are used throughout this Bulletin:

Irondale HS, New Brighton	Irondale High School 2425 Long Lake Rd., New Brighton 55112
Minnetonka HS	Minnetonka High School 18301 Highway No. 7, Minnetonka 55343
Ramsey HS, Roseville	Alexander Ramsey High School 1261 W. Highway 36, Roseville 55113
Richfield HS	Richfield Senior High School 7001 Harriet Ave. S., Richfield 55423
Robbinsdale/Armstrong HS, Plymouth	Robbinsdale/Armstrong Senior High School 10635 36th Ave. N., Plymouth 55441

**UNIVERSITY OF MINNESOTA
TWIN CITIES CAMPUS
WEST BANK**

1ST ST. S.

2ND ST. S.

PARKING LOT
NO. 95

134

ART

LAW BUILDING

WILLEY
HALL

WEST BANK UNION

PARKING
LOT
NO. 61

TH 12

WEST BANK UNION

BLEGEN
HALL

ANDERSON
HALL

MANAGEMENT AND
ECONOMICS

SOCIAL
SCIENCES

O. MEREDITH
WILSON
LIBRARY

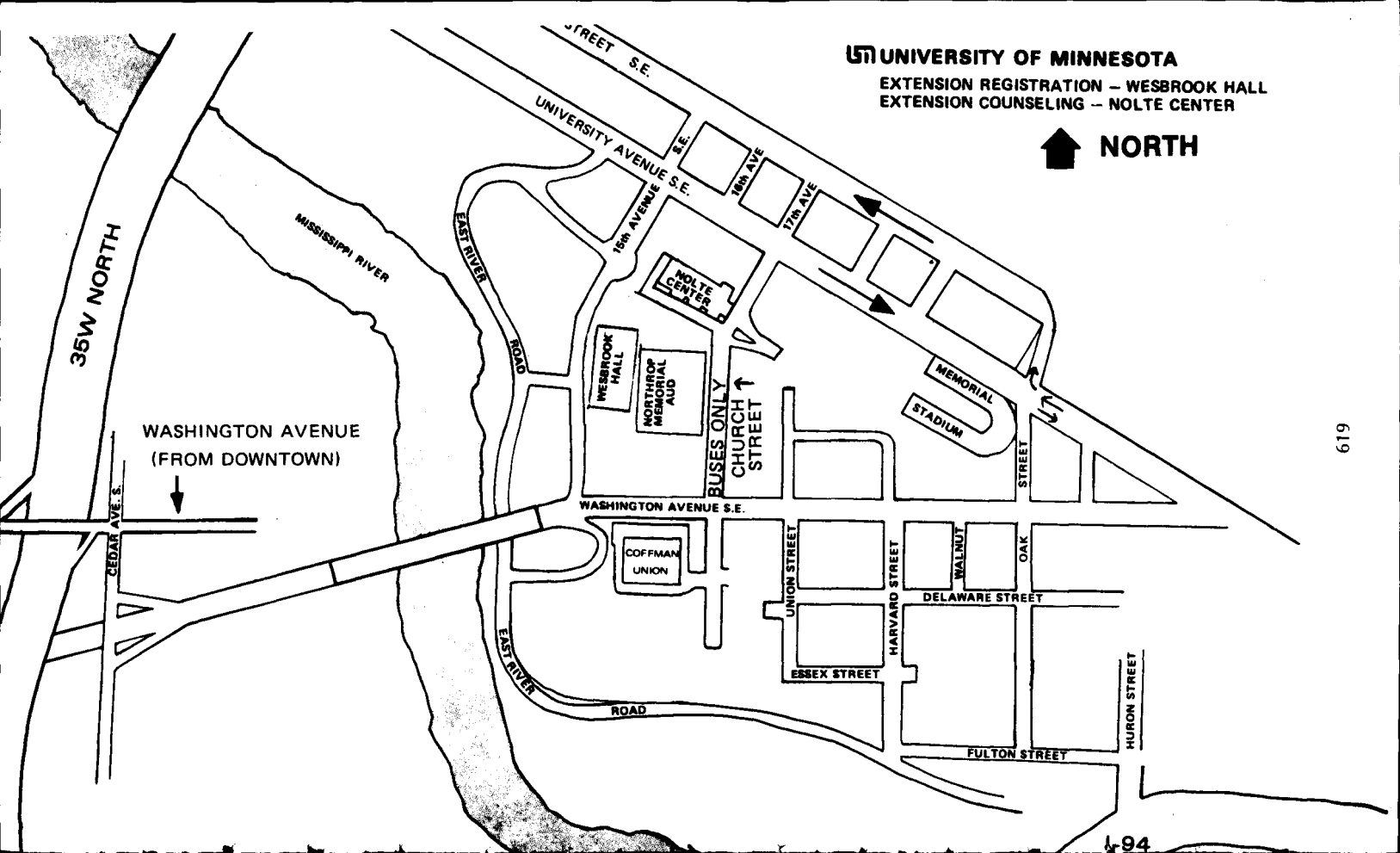
RARIG
CENTER

PARKING LOT
NO. 92




P.L.

4TH ST. S.

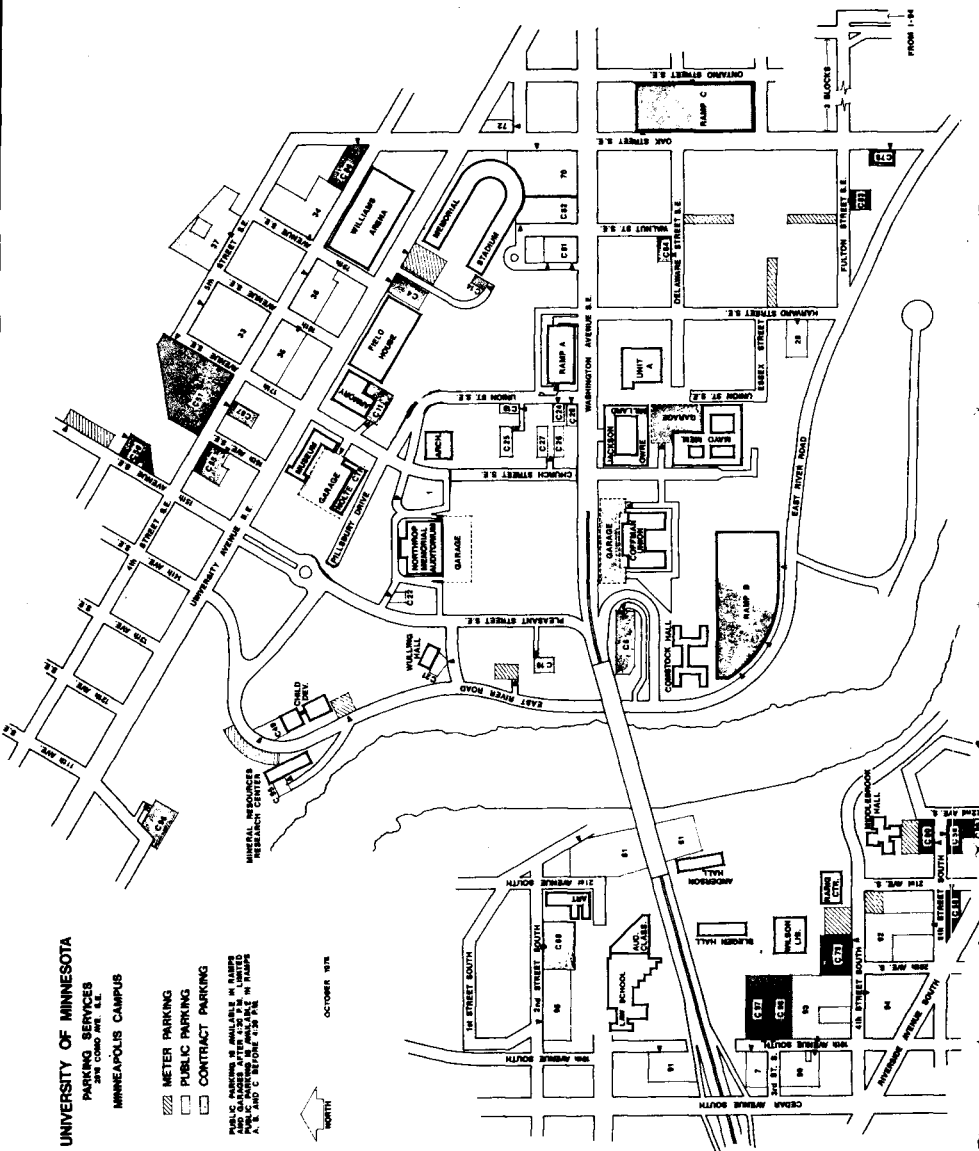
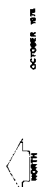
UNIVERSITY OF MINNESOTA
EXTENSION REGISTRATION – WESBROOK HALL
EXTENSION COUNSELING – NOLTE CENTER



UNIVERSITY OF MINNESOTA
 PARKING SERVICES
 315 COMB BLDG.
 MINNEAPOLIS CAMPUS

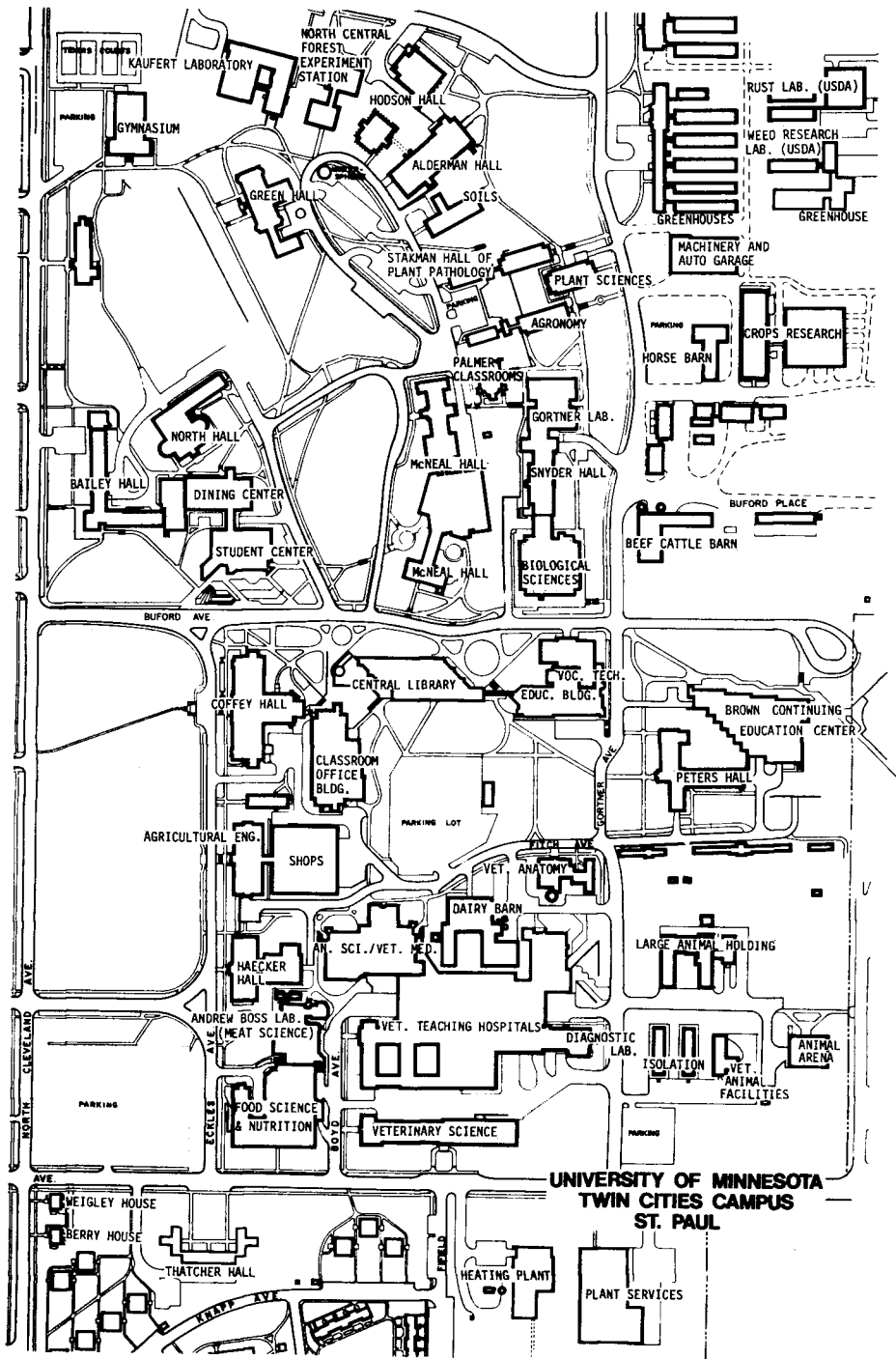
-  METER PARKING
-  PUBLIC PARKING
-  CONTRACT PARKING

PUBLIC PARKING IS AVAILABLE IN AREAS
 MARKED WITH "P" IN THIS MAP.
 PUBLIC CONTRACT PARKING IS AVAILABLE IN AREAS
 MARKED WITH "C" IN THIS MAP.



PARKING FACILITIES (East and West Bank)






See **Parking Facilities** on page 535 in this bulletin for more information about parking.

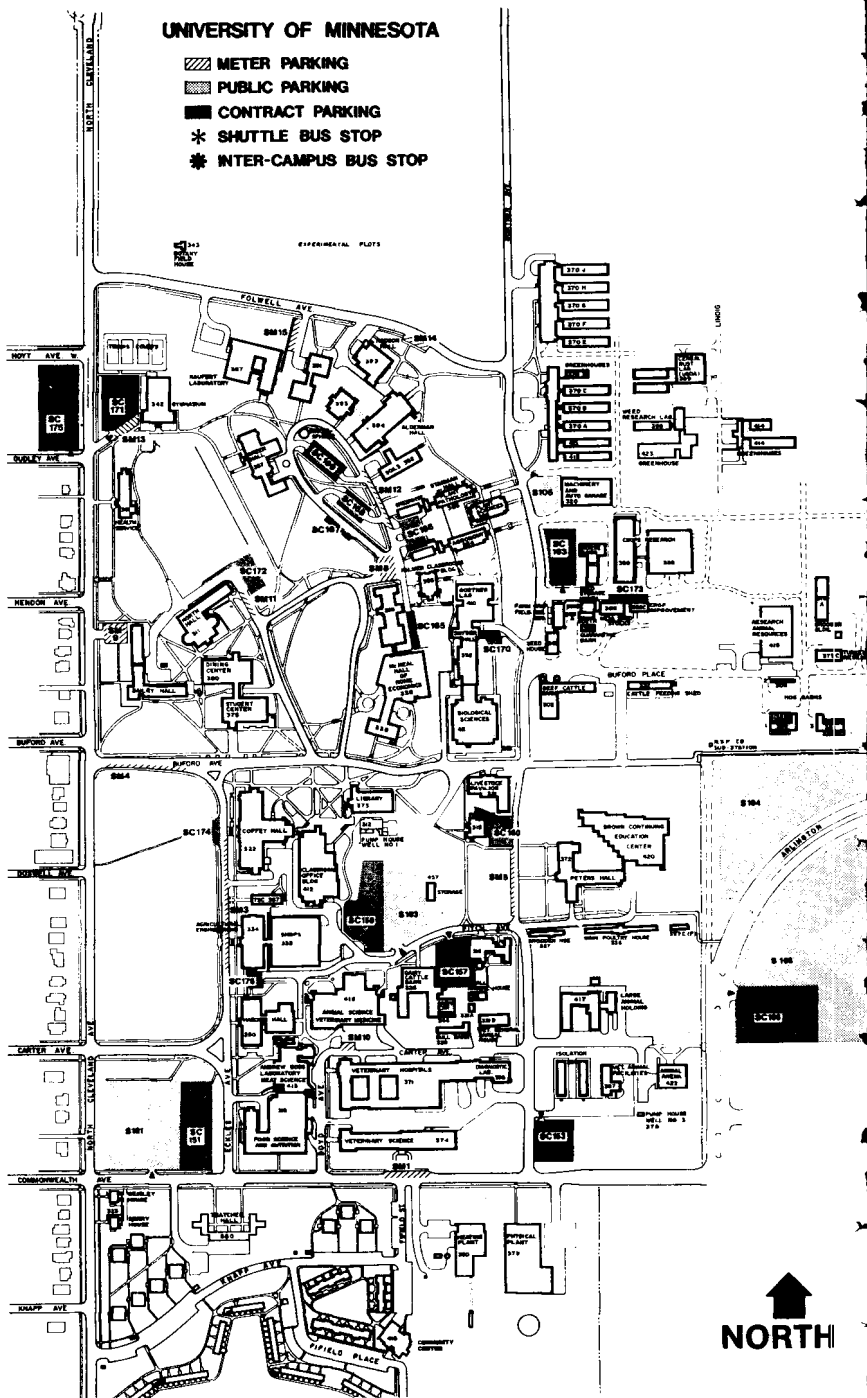


**UNIVERSITY OF MINNESOTA
TWIN CITIES CAMPUS
ST. PAUL**

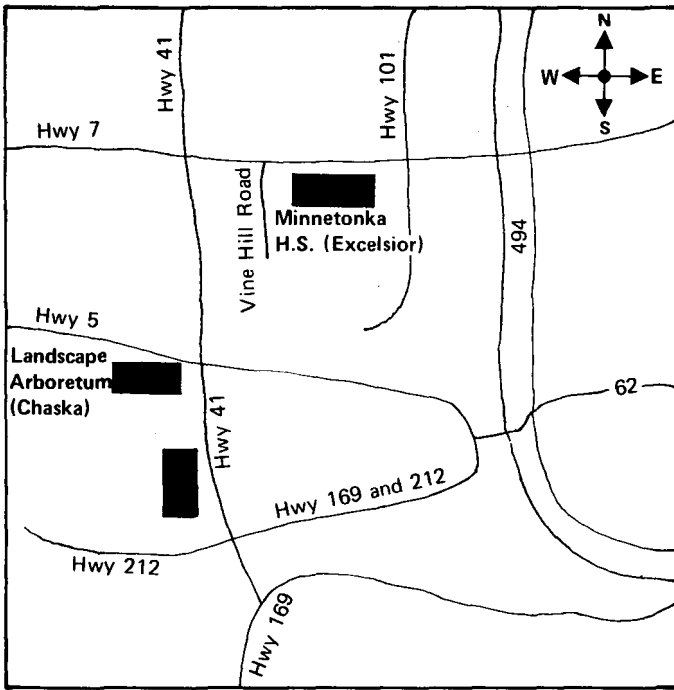


UNIVERSITY OF MINNESOTA

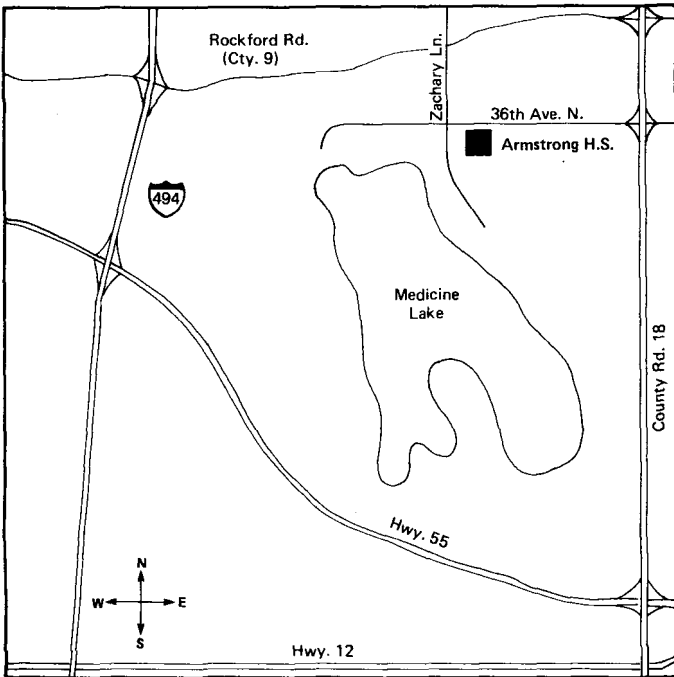
-  METER PARKING
-  PUBLIC PARKING
-  CONTRACT PARKING
-  SHUTTLE BUS STOP
-  INTER-CAMPUS BUS STOP



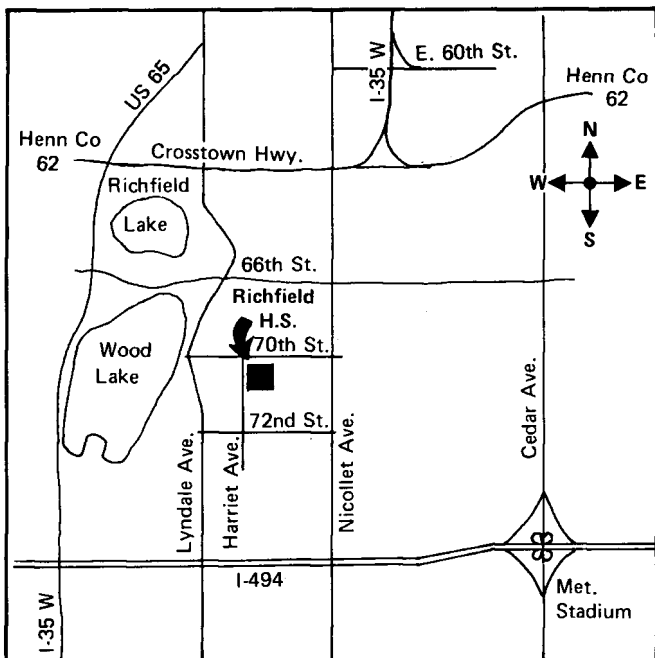
ST. PAUL CAMPUS PARKING



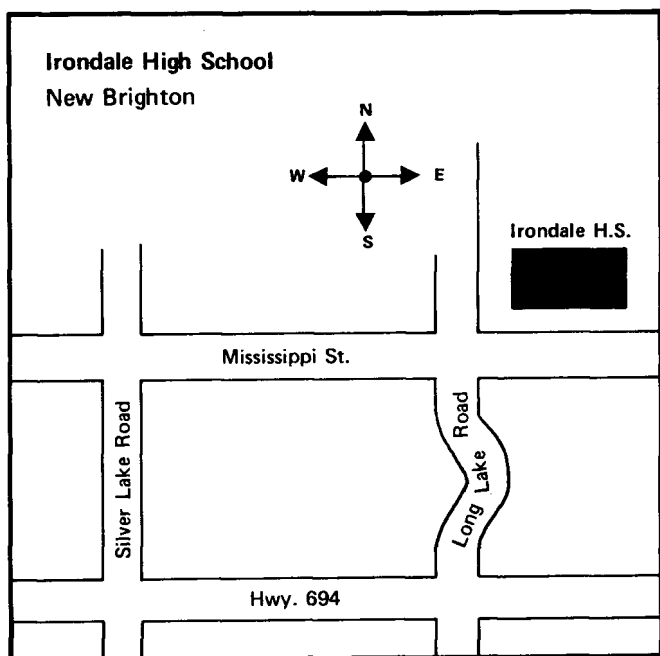
Minnetonka High School
18301 Hwy. 7, Minnetonka 55343



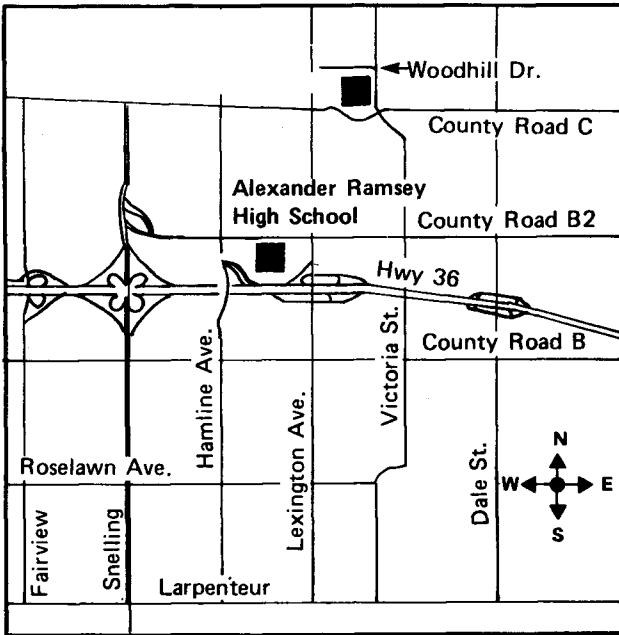
Robbinsdale/Armstrong Senior High School
10635 36th Ave. N., Plymouth 55441



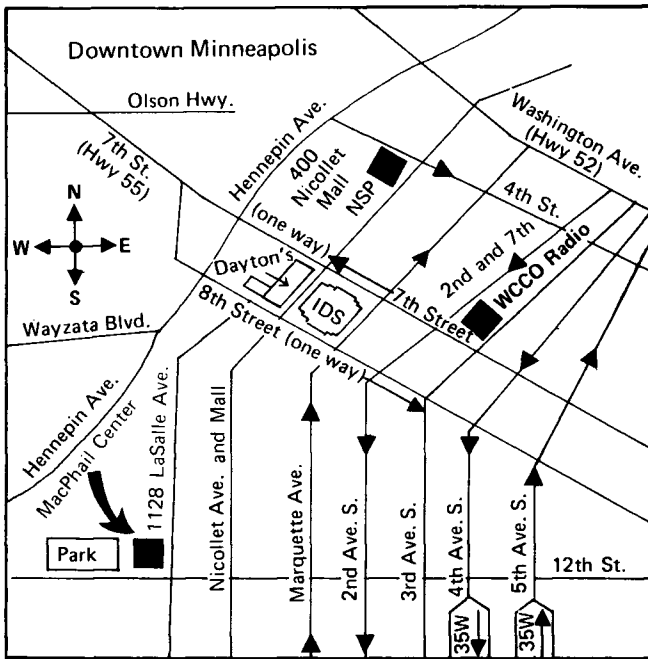
Richfield High School
7001 Harriet Ave. S., Richfield 55423



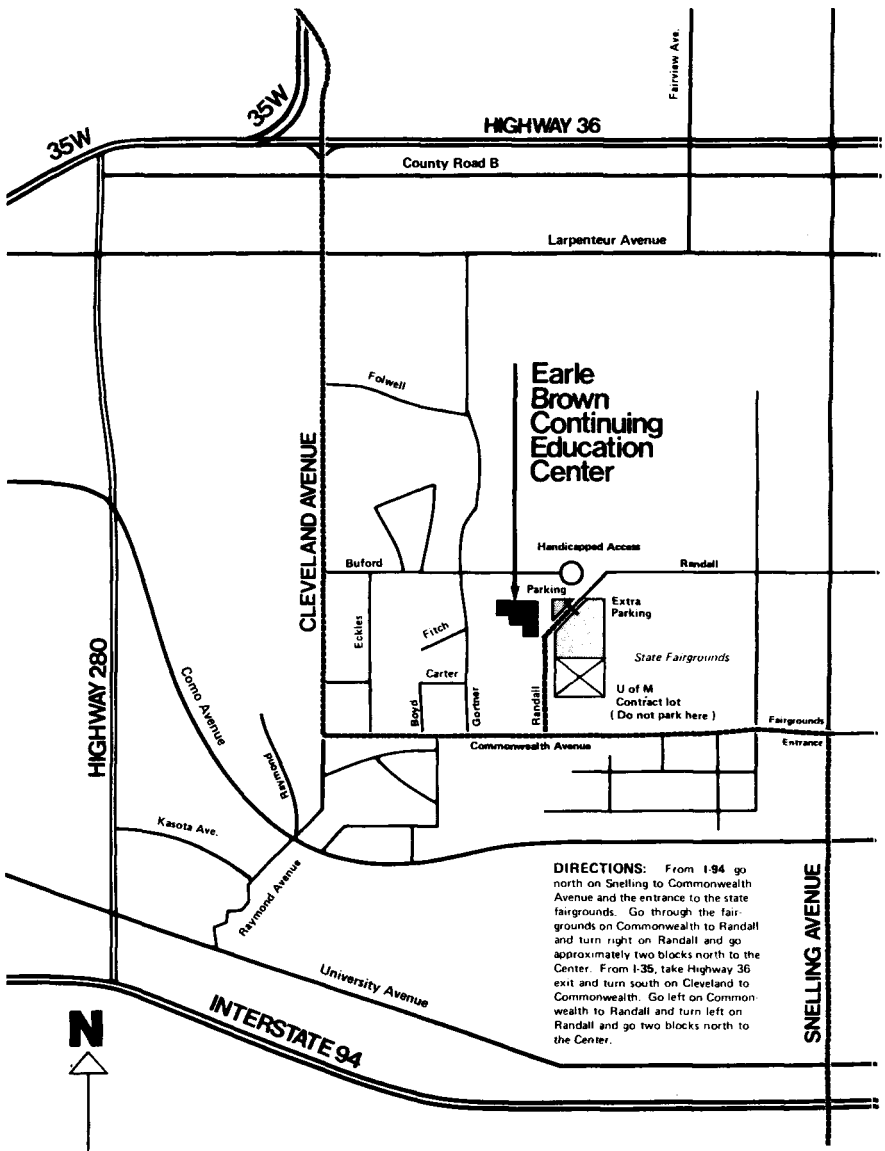
Irondale High School
2425 Long Lake Rd., New Brighton 55112



Ramsey High School
1261 W. Hwy. 36, Roseville 55113



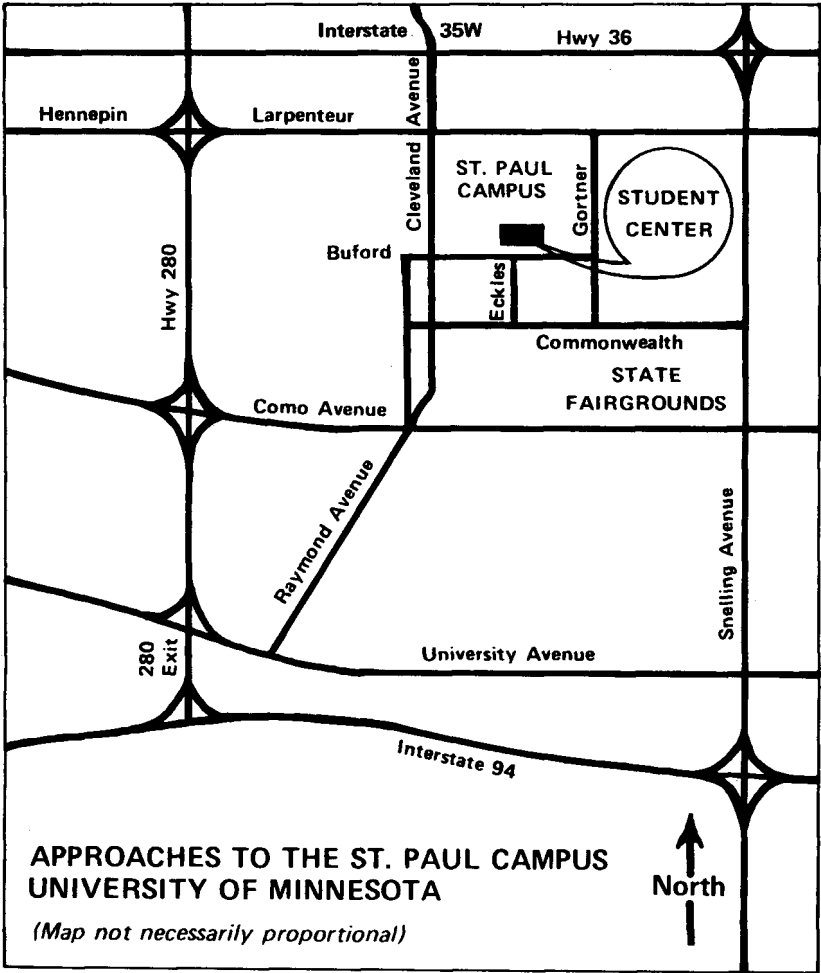
MacPhail Center For the Arts
1128 LaSalle Ave., Minneapolis 55403



**Earle
Brown
Continuing
Education
Center**

Handicapped Access
 Parking
 Extra Parking
 State Fairgrounds
 U of M
 Contract lot
 (Do not park here)

DIRECTIONS: From I-94 go north on Snelling to Commonwealth Avenue and the entrance to the state fairgrounds. Go through the fairgrounds on Commonwealth to Randall and turn right on Randall and go approximately two blocks north to the Center. From I-35, take Highway 36 exit and turn south on Cleveland to Commonwealth. Go left on Commonwealth to Randall and turn left on Randall and go two blocks north to the Center.



Neighborhood Centers

Classes for Neighborhood Centers

The courses listed (by term) below will be held at off-campus, neighborhood centers in the Twin Cities area.

Some schools may be holding "energy week" when the buildings will be closed for a week to conserve winter fuel supplies. During those weeks Extension classes will be held on campus, and your instructor will inform you where your class will take place. Check the following few pages to see if the center where you will be taking a class has scheduled any closings.

See the maps on pages 623-625.

See the course listings section of this **Bulletin** (arranged alphabetically by department) for course descriptions.

See page 616 for addresses and abbreviations of neighborhood centers.

See page 613 for departmental abbreviations.

See the **When and How to Register** section of this **Bulletin** for registration instructions and dates. **In-person registrations are not accepted at the neighborhood centers.**

Books for most classes at neighborhood centers are available from the Minnesota Book Center in Williamson Hall on the east bank campus (373-3688) or at the Smith Bookstore on the west bank campus (373-4450). 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 29, 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. However, courses may be deleted or added by Extension Classes during the academic year without notification. Read **INFO** for Bulletin changes.

If you are registering for a limited class (one with course number and title preceded by a ★ and printed in red ink in the course listings section of this **Bulletin**) be sure to read the registration information about limited classes on page 20 of this **Bulletin**. Students should register early by mail for classes with limited enrollment.

The list below is not all inclusive; other courses in this **Bulletin** are held at other off-campus locations and at the MacPhail Center, downtown Minneapolis. They are described in the **Course Offerings** section.

Some courses listed below may have prerequisite courses which must be satisfactorily completed before the listed course may be taken. Students are urged to check the course description before attempting to register for any course.

Irondale High School (New Brighton)

2425 Long Lake Road, New Brighton, MN 55112 (map on page 624)

Irondale will be closed February 18-22; classes will be held on campus that week.

Fall Quarter

Anth 1102	Introduction to Social and Cultural Anthropology
GC 1111	Science in Context: Weather and Climate

Fall Semester

Econ 1001	Principles of Economics
Psy 1001	General Psychology

Winter Quarter

EPsy 5607	Mainstreaming: Issues in Individualizing Instruction
EPsy 5651	Managing Problem Behavior in the Classroom
Mgmt 3001	Fundamentals of Management

Spring Semester

Econ 1002	Principles of Economics
-----------	-------------------------

Spring Quarter

Comp 1011	Writing Practice
GC 3342	Moral Issues in Business

Minnetonka High School

18301 Highway 7, Minnetonka, MN 55343 (map on page 623)

Enter the building at the back door only.

Fall Quarter

BFin 3000	Finance Fundamentals
BLaw 3058	Business Law
Comp 1011	Writing Practice
Math 0009	Intermediate Algebra
Psy 1003	Application of Psychology to Living

Fall Semester

Econ 1001	Principles of Economics
-----------	-------------------------

Spring Semester

Econ 1002	Principles of Economics
-----------	-------------------------

Spring Quarter

Phil 1001	Logic
Psy 1001	General Psychology

Alexander Ramsey High School (Roseville)

1261 West Highway 36, Roseville, MN 55113 (map on page 625)

Energy Week is February 18-22 at Ramsey, and the school building will be closed.

Classes scheduled at Ramsey will be held at Fairview Community Center.

Fall Quarter

ArtS 1101	Basic Drawing
IR 3010	Human Relations and Applied Organization Theory
Math 0009	Intermediate Algebra
Math 1111	College Algebra and Analytic Geometry
Math 1201	Pre-Calculus
Math 1211	Calculus I
Psy 3604	Abnormal Psychology

Fall Semester

Econ 1001, 1002 Principles of Economics

Winter Quarter

GC 3345	Morality and The Law
Math 1142	Short Calculus
Math 1211	Calculus I
Math 1221	Calculus II
Psy 1003	Application of Psychology to Living

Spring Semester

Econ 1001, 1002 Principles of Economics

Spring Quarter

Comp 1011	Writing Practice
BFin 3000	Finance Fundamentals
Mgmt 3001	Fundamentals of Management
Mktg 3000	Principles of Marketing
Math 1111	College Algebra and Analytic Geometry
Math 1221	Calculus II
Math 1231	Calculus III
Stat 3091	Introduction to Probability and Statistics

Richfield Senior High School

7001 Harriet Avenue S., Richfield, MN 55423 (map on page 624)

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

AmSt 1101/3111	American Life
Comp 1011	Writing Practice
IR 3002	Labor Markets and the Management of Human Resources
Mgmt 3001	Fundamentals of Management
Mktg 3000	Principles of Marketing
Math 1111	College Algebra and Analytic Geometry
Math 1201	Pre-Calculus
Math 1211	Calculus I
Spch 1101	Fundamentals of Speech-Communication: Oral Communication
WoSt 3501	Women and Literature

Fall Semester

Econ 1001	Principles of Economics
Psy 1001	General Psychology

Winter Quarter

AmSt 1102/3112	American Life
BLaw 3058	Business Law
Comp 1027	Intermediate Expository Writing
EPsy 5612	Education of Learning-Disabled Children
BFin 3000	Finance Fundamentals
GC 1540	Accounting Fundamentals I
Math 1211	Calculus I

Spring Semester

Econ 1002	Principles of Economics
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Spring Quarter

AmSt 1103/3113	American Life
BGS 3002	Business and Society
Comp 1011	Writing Practice
GC 3464	Communication in Organizations
Math 0009	Intermediate Algebra
Math 1221	Calculus II
Psy 1003	Application of Psychology to Living
PubH 3001	Personal and Community Health

Robbinsdale/Armstrong Senior High School (Plymouth)

10635 36th Ave. N., Plymouth, MN 55441 (map on page 623)

Fall Quarter

IR 0001C Supervision I: Elements of Supervision
Math 0009 Intermediate Algebra

Fall Semester

Econ 1001, 1002 Principles of Economics
- Psy 1001 General Psychology

Winter Quarter

Comp 1011 Writing Practice
Mktg 3000 Principles of Marketing
Math 1111 College Algebra and Analytic Geometry

Spring Semester

Econ 1002 Principles of Economics

Spring Quarter

BLaw 3058 Business Law
Comp 1027 Intermediate Expository Writing
Engl 1009 Introduction to the Study of Literature
IR 3010 Human Relations and Applied Organization Theory
Math 1211 Calculus I
Soc 1001 Introduction to Sociology

St. Paul campus class offerings

The following courses will be offered this year on the St. Paul campus of the University of Minnesota. See the **Course Offerings** section of this **Bulletin** (arranged alphabetically by department) for complete course titles and descriptions. See St. Paul campus map, page 621.

Buy books for classes offered on the St. Paul campus at the Books Underground bookstore. Also see the **How and When to Register** section of this **Bulletin**.

Fall Quarter

AgEc 1400	Agricultural Markets and Prices
BioC 1301	Elementary Biochemistry I
BioC 5025	Laboratory in Biochemistry
Biol 3011/3111	Animal Biology
Biol 5001	Biochemistry
Dsgn 1201	Introduction to Commerical Art
Dsgn 1202	Commercial Drawing I
Dsgn 1231	Commercial Illustration I
Dsgn 1251	Advertising Design I
Dsgn 3252	Advertising Design II
Dsgn 3280	Portfolio and Visual Presentation Techniques
Dsgn 1452	Home Furnishings for Consumers I
Dsgn 1501	Introduction to Design
Dsgn 1521	Design Process: Color
Dsgn 1523	Design Process: Visual Presentation I
Dsgn 1525	Design Process: Two-Dimensional Design I
Dsgn 1532	Structure-Fabric Design I
Dsgn 1533	Metalsmithing
Dsgn 1550	Basic Drafting Techniques
Dsgn 3453	Interior Problems IV: Certificate
Dsgn 3532	Fiber Structure: Weaving
Dsgn 3535	Design Process: Materials
Dsgn 3551	Interior Design Rendering
Dsgn 3562	Real Estate Practices I
Dsgn 3571	Professional Issues in Applied Design
Dsgn 5571	Complex Weaves: Floor Looms to the Jacquard
FSoS 5002	Adolescent Sexuality
FSoS 5200	Family Relationship
FSoS 5240	Minority Families in the United States
FSoS 3026	Assessment of Alcohol and Drug Abuse Problems
FSoS 3029	Counseling Skills Practicum I
FSoS 3030	Counseling Skills Practicum II
FSoS 3031	Counseling Skills Practicum III
FSoS 3032/5032	Chemical Abuse and the Family: An Overview
FSoS 3037/5037	Group Therapy: Theory and Practice
FSoS 5026	Assessment of Alcohol and Drug Use Problems
FSoS 5029	Counseling Skills Practicum I
FSoS 5030	Counseling Skills Practicum II
FSoS 5031	Counseling Skills Practicum III
FSoS 5036	Self-Help Counseling for Alcohol and Drug Use Problems
FScN 1603	Family Nutrition

FScN 3110	Food Chemistry
FScN 3112	Food Chemistry Laboratory
FScN 5135	Food Process Engineering I
FScN 5380	Food Packaging
FScN 5523	Technology of Fermented Dairy Products
FScN 5643	World Food Supply Problems
FScN 5662	Clinical Nutrition
FScN 5665	Applied Clinical Nutrition I
FScN 5675	Clinical Nutrition Laboratory I
GCB 3022/5022	Genetics
GCB 5043	Human Genetics
Hort 1010	Home Horticulture
Hort 3077	Floral Design
lofT 0001	Fundamentals of Engineering Review (E.I.T. Refresher)
LA 1024	Theory of Landscape Design
PubH 5640	Child Abuse and Neglect Seminar
Rhet 5257	Scientific and Technical Presentations
Rhet 5258	Interviewing: Dynamics of Face-to-Face Communication
Rhet 5400	Dissemination and Utilization of Information
Soc 5675	World Food Supply Problems
Soil 1122/5022	Introductory Soil Science
Soil 3118	Soil Pollution and Public Policy
TexC 1602	Fitting the Human Subject
TexC 3601	Tailoring
TexC 3646	Retail Supervision
YoSt 5130	Compulsive and Addictive Behavior During Adolescence
YoSt 5130	Adventure-Based Experiential Learning
YoSt 5230	Work with Youth—Individual
YoSt 5330	Child and Adolescent Psychology for Practitioners
YoSt 5401	Communicating with Adolescents About Sexuality
YoSt 5631	Health Needs and Problems of Adolescent Females
YoSt 5636	Adolescent Parenthood
CEW 0216	Women Alone: Alive and Thriving
IC 0108	Introduction to Color Photography
IC 0117	Opera: An Introduction
IC 0207	Minnesota Plants and Their Uses
IC 0294	Basic Sailing Techniques
IC 0417	Dealing With Job Stress
IC 0440	How to Market Your Photographs
IC 0541	Soil Pollution and Public Policy
IC 0596	Introduction to Word Processing

Fall Semester

Econ 1001 Principles of Economics

Winter Quarter

AgEc 5480 Futures Markets and Prices
 BioC 1302 Elementary Biochemistry II
 Biol 1103 General Botany
 Biol 5004 Cell Biology
 Dsgn 1202 Commercial Drawing I
 Dsgn 1220 Commercial Art Media and Studio Techniques

Dsgn 1251	Advertising Design I
Dsgn 3240	Commerical Illustration II
Dsgn 3252	Advertising Design II
Dsgn 3260	Advertising Design III
Dsgn 1521	Design Process: Color
Dsgn 1523	Design Process: Visual Presentation I
Dsgn 1525	Design Process: Two-Dimensional Design I
Dsgn 1526	Presentation to Clients
Dsgn 1531	Surface-Fabric Design
Dsgn 1532	Structure Fabric Design I
Dsgn 1533	Metalsmithing
Dsgn 1550	Basic Drafting Techniques
Dsgn 1552	Introduction to Housing and Interior Design
Dsgn 3523	Visual Presentation II
Dsgn 3532	Fiber Structure: Weaving
Dsgn 3537	Fiber Structure: Off Loom
Dsgn 5554	Interior Design IV: Contract Design
FSoS 5025	Parenting
FSoS 3027/5027	Current Issues and Pharmacology of Alcohol and Drug Abuse
FSoS 3029/5029	Counseling Skills Practicum I
FSoS 3030/5030	Counseling Skills Practicum II
FSoS 3031/5031	Counseling Skills Practicum II
FSoS 3036/5036	Self-Help Counseling for Alcohol and Drug Use Problems
FSoS 3037/5037	Group Therapy: Theory and Practice
FScN 3622	Life Cycle and Community Nutrition
FScN 5120	Food Microbiology
FScN 5136	Food Processing Engineering II
FScN 5555	Freezing and Dehydration of Foods
FScN 5622	Macronutrient Metabolism
FScN 5666	Applied Clinical Nutrition II
FScN 5676	Clinical Nutrition Laboratory II
Hort 1036	Plant Propagation
Hort 3026	Residential Landscape Design
Hort 3031	Fruit Science
Hort 5042	Turf Grass Science
Hsg 5301	The Family and Energy Issues
LA 3094	Landscape Architecture Graphics
PE 1056	Nordic (Cross Country) Skiing
PIPa 1001	Introduction to Plant Pathology
PubH 5608	Alcohol and the Family: Effects of the Fetus and the Child
PubH 5643	Sexual Abuse of Children
Rhet 1147/5147	Efficient Reading
Rhet 5258	Interviewing: Dynamics of Face-to-Face Communication
Rhet 5600	Transfer of Technology
Stat 5021	Statistical Analysis I
TexC 1603	Advanced Principles of Apparel Production
TexC 5622	Textile Consumer Protection
CVM 1100	Care, Management, Showing and Diseases of Horses
YoSt 5130	Seminar on Adolescent Childbearing/Child Rearing

Yost 5232	Work with Youth-Families
YoSt 5331	Youth Agencies, Organizations, and Youth Service Systems
YoSt 5402	Serious Adolescent Sexuality Problems
IC 0226	Ecology and Management of Minnesota Fish
IC 0290	Horses
IC 0295	Sailboat Cruising
IC 0427	Creating an Effective Slide Show
IC 0596	Introduction to Word Processing

Spring Semester

Econ 1002	Principles of Economics
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Spring Quarter

AgEc 3290	Agribusiness Management
Dsgn 1201	Introduction to Commercial Art
Dsgn 1202	Commercial Drawing I
Dsgn 1220	Commercial Art Media and Studio Techniques
Dsgn 1251	Advertising Design I
Dsgn 3202	Commercial Drawing II
Dsgn 3260	Advertising Design III
Dsgn 1454	Home Furnishings for Consumers II
Dsgn 1501	Introduction to Design
Dsgn 1521	Design Process: Color
Dsgn 1523	Design Process: Visual Presentation I
Dsgn 1525	Design Process: Two-Dimensional Design I
Dsgn 1532	Structure Fabric Design I
Dsgn 1550	Basic Drafting Techniques
Dsgn 3450	Perspective and Presentation Sketches
Dsgn 3477	Contract Design Problems
Dsgn 3521	Design Process: Color II
Dsgn 3523	Design Process: Visual Presentation II
Dsgn 3531	Surface-Fabric Design II
Dsgn 3533	Metalsmithing Fabrication
Dsgn 3536	Metalsmithing Enameling
Dsgn 3537	Fiber Structure: Off Loom
Dsgn 3548	Lighting Design for Environmental Spaces
Dsgn 3550	Interior Design Presentation
Dsgn 3562	Real Estate Practices I
Dsgn 5515	20th-Century Interiors and Furnishings
Dsgn 5532	Fiber Structure Design
Dsgn 5552	Interior Design III: Residential Design
Engl 3950	Sinclair Lewis, Novelist of the Twenties
FSoS 5240	Myths and Notions about Parenting
FSoS 5240	Psychology of Stress, Coping, and Adaptation: Implications for Practice
FSoS 5260	Dynamics of Family Decision Making
FSoS 3028/5028	Treatment of Alcohol and Drug Use Problems
FSoS 3029/5029	Counseling Skills Practicum I
FSoS 3030/5030	Counseling Skills Practicum II
FSoS 3031/5031	Counseling Skills Practicum III
FSoS 3032/5032	Chemical Abuse and the Family: An Overview

FSoS 3037/5037	Group Therapy: Theory and Practice
FScN 5122	Sanitation and Control of Microorganisms
FScN 5123	Microbiology of Food Fermentation
FScN 5312	Chemical and Instrumental Analysis of Foods
FScN 5350	Experimental Design in the Food Industry
FScN 5412	Physicochemistry of Foods
FScN 5524	Sensory Evaluation of Dairy Products
FScN 5624	Metabolic Approach to Clinical Nutrition
FScN 5667	Applied Clinical Nutrition III
FScN 8313	Topics in Lipid Chemistry
GCB 3008	The Biology of Cancer
Hort 1021	Woody Plant Materials
Hort 5020	Horticultural Techniques for Education Majors
Hsg 5561	Housing Management
LA 1031	Introduction to Landscape Architecture
PE 1041	Cycling
PIPa 3001/5002	Plant Pathology: Lecture, Laboratory, Diagnosis
PubH 5625	Working With Adolescents Workshop
PubH 5644	Health Promotion for Children and Youth
Rhet 5257	Scientific and Technical Presentations
Rhet 5500	Research in Communication Strategies
Rhet 5571	Writing for Special Purposes
Stat 5022	Statistical Analysis II
TexC 3604	Flat Pattern Design
YoSt 5132	Experiential Learning
YoSt 5232	Work With Youth—Groups
YoSt 5332	Understanding and Working with Special Populations of Youth
YoSt 5403	Intervention and Counseling with Adolescents and Families—Serious Sexual Problems
CEW 0405	Putting Your Home Computer to Work for You
IC 0108	Introduction to Color Photography
IC 0245	Landscaping the Minnesota Home Grounds
IC 0248	Hives and Honeybees
IC 0300	Photographing Wild Flowers
IC 0440	How to Market Your Photographs
IC 0576	Farm Management for the Absentee Landowner
IC 0577	Getting Started in Part-Time Farming

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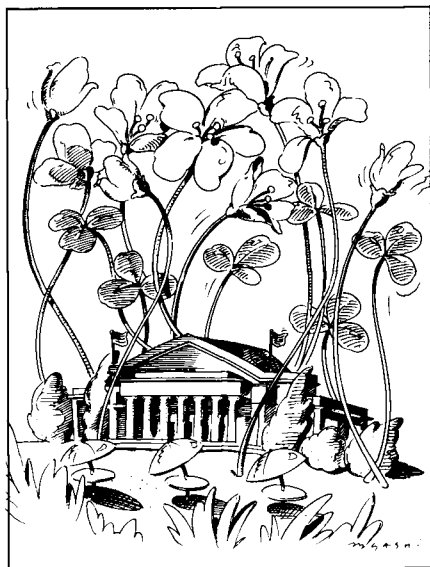
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Summer '85

Summertime Can Be Learning Time



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Call 376-3000 to request a summer evening bulletin if you do not receive one by April 15, 1985.

Terms (tentative)

First 5-week term	June 17 to July 19
Second 5-week term	July 22 to August 23
10-week term	June 17 to August 23

Registration dates (tentative)

By mail	Beginning May 13
In person	Beginning May 28