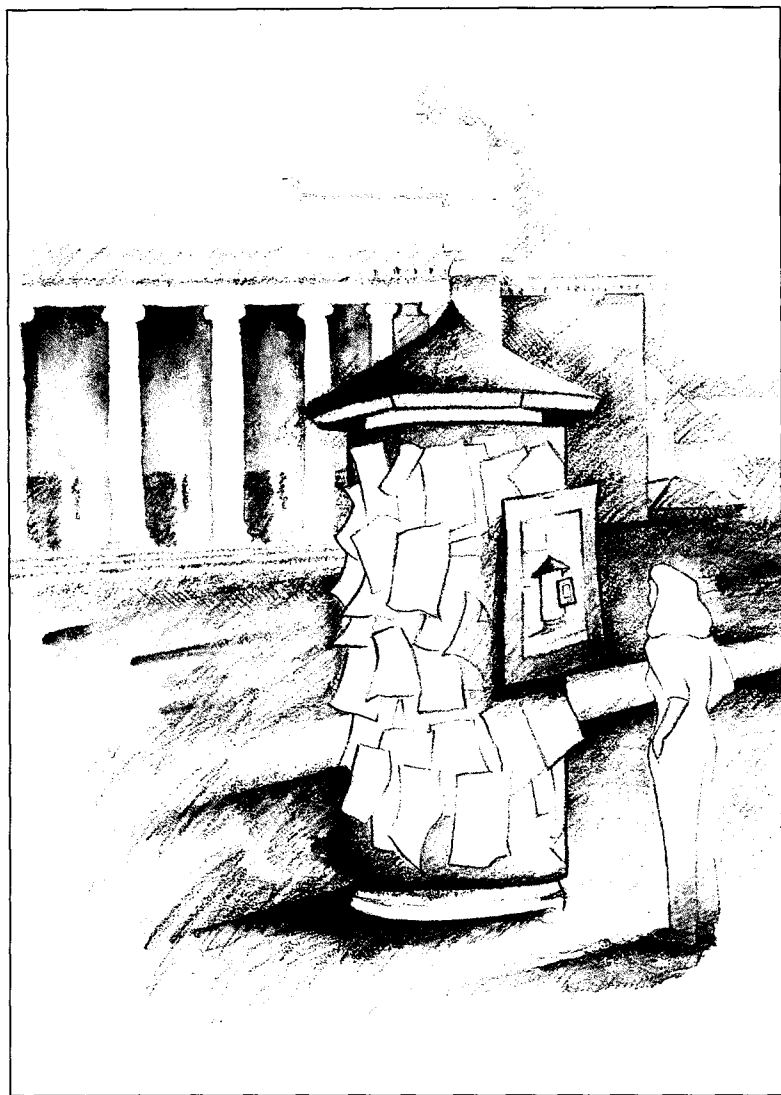


UNIVERSITY OF MINNESOTA BULLETIN

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Summer Evening Extension Classes
Continuing Education and Extension

1990 Summer Evening Extension Classes

First 5-week term June 12 to July 17
10-week term June 12 to August 22
Second 5-week term July 19 to August 22

Register by mail or in person

Registration Dates

For limited- and nonlimited-enrollment classes

- I. Mail Registration (call 624-2388 for registration forms)
 - Ten-week term May 7 to May 30
 - First 5-week term May 7 to May 30
 - Second 5-week term May 7 to July 3
- II. In-Person Registration (See Office Hours, page 9)
 - Ten-week term May 22 to May 30
 - First 5-week term May 22 to May 30
 - Second 5-week term May 22 to July 3

U.S. Olympic Festival-'90 *Twin Cities • July 6-15, 1990*

The University of Minnesota joins in hosting the U.S. Olympic Festival this summer with events in 11 sports scheduled on campus. In addition, University dormitories and other facilities will serve as an Olympic Festival village. The festival promises to be an exciting but busy time, and Extension students are urged to plan accordingly. Expect traffic and parking congestion, especially on the east bank of the Minneapolis campus during the week of July 8. West bank parking facilities may be more convenient and less crowded.

Volume 93, Number 6

April 5, 1990

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.

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Extension Classes Bulletin

For complete information about Extension Classes, consult the current **1989-90 Extension Classes Bulletin**. For a copy, telephone 624-2388. **The 1990-91 Bulletin will be available August 1, 1990.**

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, veteran status, or sexual orientation. In adhering to this policy, the University abides by the Minnesota Human Rights Act, Minnesota Statute Ch. 363; by the Federal Civil Rights Act, 42 U.S.C. 2000e; and 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; by 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 addressed to Patricia A. Mullen, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, University of Minnesota, 100 Church Street S.E., Minneapolis, MN 55455, (612) 624-9547; 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.

Registration and General Information

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

Extension Counseling and Program Advising

314 Nolte Center
University of Minnesota
315 Pillsbury Drive S.E.
Minneapolis, MN 55455
625-2500

Extension Classes

Continuing Education and Extension

UNIVERSITY OF MINNESOTA

Steven J. Vite, Charles R. Cheesebrough, Editors

When and How to Register

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 625-3333. 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 who 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 624-2388 to request that registration forms be sent to you.** Forms for recreational sports participation, 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 Westbrook Hall on the Minneapolis campus (east bank) of the University of Minnesota and at the MacPhail Center in downtown Minneapolis at 1128 LaSalle Avenue. In-person registration is offered on the St. Paul campus, 130 Coffey Hall. See maps near the end of this bulletin.

- 2. Complete the registration form giving all the requested information.** A sample registration form is shown on the following 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). 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 (usually on your returned fee statement).

If you do know your University student I.D. number, include that in the space provided.

For information about grade base option, see page 18.

Nontranscript registrations are those that apply to noncredit students (other than auditors) and certain noncredit courses; they are explained on page 24.

Be sure to complete the enrollment period section giving the appropriate summer term and year. 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 are required for coding purposes.

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

sure of this information is voluntary. There is no consequence to you if you fail to identify your sex or University I.D. number on the registration form.

NOTE: Failure to provide your birth date or social security number may lead to identification errors in your records.

b. Please type or use ballpoint 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.

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

	10-week term	First 5-week term	Second 5-week term
Registration by mail	May 7 to May 30	May 7 to May 30	May 7 to July 3
In-person registration	May 22 to May 30	May 22 to May 30	May 22 to July 3
Last day to register without a late fee	May 30, 1990	May 30, 1990	July 3, 1990
	(Reserved class space will be forfeited after May 30, 1990)		
Reopening day	June 11, 1990	June 11, 1990	June 11, 1990

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

Continuing Education and Extension UNIVERSITY OF MINNESOTA				Department of Extension Classes REGISTRATION FORM			
DEPARTMENT	COURSE NO.	SECTION	CREDIT	GRADUATE CREDIT REQUESTED			
ArtS	5160	5	3	SEE BULLETIN FOR EXPLANATIONS			
DAY	HOUR	LOCATION	COURSE TITLE AS APPEARS IN BULLETIN	PAGE NO.	NON-TRANSCRIPT REGISTRATION		
TTh	6-9:45	ArtB 141	Watercolor	38	% PRICE	OVER \$2	UNDER \$2
TUITION		COURSE FEES	SPECIAL FEES	LATE FEE	COURSE TOTAL		
\$153		\$5	\$5	--	\$163		
NAME LAST				FIRST	MIDDLE	BIRTH DATE (USE NUMERICS)	
Klack				Wendy	Ann	MONTH 6 / 28 / YEAR 52	
LOCAL STREET ADDRESS (INCLUDING APT. NO. IF APPROPRIATE)				SOCIAL SECURITY NO.			
56 Knollways Circle South				303-04-0101			
CITY		STATE ABBREV.	ZIP CODE	HOME PHONE	SEX		
Hopkins		MIN	55343	829-9417	<input checked="" type="checkbox"/> M <input type="checkbox"/> F		
U OF M STUDENT I.D. # (IF KNOWN)				BUSINESS PHONE AND EXT.			
9200203							
ENROLLMENT PERIOD 1990							
FALL QTR. <input type="checkbox"/> (1)		FALL SEM. <input type="checkbox"/> (2)		1ST SUMMER TERM <input checked="" type="checkbox"/> (3)		2ND SUMMER TERM <input type="checkbox"/> (4)	
WTR. QTR. <input type="checkbox"/> (5)		SPR. SEM. <input type="checkbox"/> (6)		10 WEEK SUMMER TERM <input type="checkbox"/> (7)		SPECIAL TERM <input type="checkbox"/> (8)	
SPR. QTR. <input type="checkbox"/> (9)				MONTH / DAY / YEAR		START DATE	
				MONTH / DAY / YEAR		END DATE	

Registration by Mail

- Follow the steps outlined above in general registration instructions.
- 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 624-2388).** If your first choice is closed, the registration office will select the first available choice listed and process the registration.
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 Wesbrook 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 registration period. Spaces in limited-enrollment classes will be filled daily. **Registrations received in the registration office before the first date of mail registration will be returned to the sender.**

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

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**, pages 11, 12, and 15.

Students registering with **Regents' Scholarships** should read the section on page 14.

Persons registering with G.I. Bill assistance must include the G. I. Bill Information Sheet with their registration. See the section on **Veterans**, page 15, 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. (Refunds for overpayments will not be made until checks clear banks.)

Students who have not received fee statements three weeks after mailing in registration forms and tuition payment should call 624-4145 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. Office hours are on page 9.**

10-week term	May 22—May 30
First 5-week term	May 22—May 30
Second 5-week term	May 22—July 3
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 non-limited 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.

5. If you reserve space in a limited class (for any term), you must pay tuition by May 30; otherwise, you forfeit your space in class.
6. Registration Offices (see maps near the end of this bulletin)

<u>Minneapolis Campus</u>	<u>Minneapolis (downtown)</u>	<u>St. Paul Campus</u>
Extension Classes 101 Westbrook Hall Minneapolis Campus	MacPhail Center 1128 LaSalle Ave. Downtown Minneapolis	St. Paul Campus Admissions and Records 130 Coffey Hall St. Paul Campus

All registration offices are closed weekends.

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.

Alternate Choice Forms

Students who are registering by mail for limited-enrollment classes are urged to submit an alternate choice form (available by calling 624-2388). 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. (Include registration forms and tuition *only* for your first choice.)

Closed Classes

Limited-enrollment classes for which there is heavy demand will often reach the maximum limit and close. 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 (no late fee through the first week of the term for classes closed before late fees have gone into effect). 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, including Accounting, have a strict policy against exceeding class limits.

Early Registration Permission

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

Submit a written request, along with transcripts of all work taken, to Extension Counseling, University of Minnesota, 314 Nolte Center, 315 Pillsbury Drive S.E., Minneapolis, Minnesota 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 student will be notified by mail regarding the action taken on such requests.

Reopening Day

When a class limit is reached, the class is closed and registrations received after that point are returned to students. Sometimes, space becomes available in closed classes because students cancel classes before the term begins or because they do not pay tuition or complete registration by the required date—May 30, 1990 (for all summer terms). After registration periods end and registrations are processed, classes that closed will be reopened to registration if space is available. For all summer terms, reopening day is June 11, 1990. 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, will be considered late registrations and will be subject to a late fee: \$5 (if accepted) through the first week of classes; \$10 (if accepted) through the second week of classes. Registrations accepted during the third week of any term and thereafter will be subject to a \$20 late fee.

After the second class meeting, no registration will be accepted without the written permission of the instructor.

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

First 5-week term	July 2
10-week term	July 23
Second 5-week term	August 8

Scholastic Committee approval is only granted under unusual circumstances. College guidelines for registration will be strongly considered for student who are admitted to a degree program at the University of Minnesota. Registrations by mail are effective the date of the postmark.

When scholastic approval is for a past term, tuition and fees will be at rates currently in effect.

There are no late fees for persons registering on the **Plus-62 Plan** or the **Youth Plan** (see page 24).

Office Hours

Campus Office (Minneapolis Campus)

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

Minneapolis, MN 55455 (telephone 625-3333)

Through June 8:	Mon. through Thurs.	8 a.m.-8 p.m.
	Fridays.	8 a.m.-4:30 p.m.
May 28 (Holiday):	All offices closed	
June 11-July 27:	Mon. through Thurs.	8 a.m.-6:30 p.m.
	Fridays.	8 a.m.-4:30 p.m.
July 4 (Holiday):	All offices closed	
July 30-Aug. 31:	Weekdays	8 a.m.-4:30 p.m.

St. Paul Campus

130 Coffey Hall

In-person registration only (limited classes)

May 22-May 30:	Mon. through Fri.	9 a.m.-4 p.m.
May 28 (Holiday):	All offices closed	

MacPhail Center Office (Downtown Minneapolis)

1128 LaSalle Avenue

Minneapolis, MN 55403 (telephone 627-4020)

May 29-Aug. 31:	Mon. through Fri.	8 a.m.-4:30 p.m.
May 28 (Holiday):	All offices closed	
July 4 (Holiday):	All offices closed	

Counseling Department (Minneapolis Campus)

314 Nolte Center (telephone 625-2500)

Monday through Friday office hours.	8 a.m.-4:30 p.m.
Evenings (Monday through Thursday)	call for an appointment

All offices are closed weekends.

Enrollment Information

Anyone with a desire to learn may register for Extension classes. There are no admission or entrance requirements; a high school diploma is not required.

Registration in specific programs or classes may require prerequisite courses or experience (see **Prerequisites** page 17). Students wishing to register for graduate credit, refer to page 20.

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

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

Extension students are responsible for knowing and following the University Student Conduct Code. Copies of the code are available at the information desk in 101 Wesbrook Hall.

Tuition and Fees

(Tuition and fees are subject to change without notice.)

The 1990 summer tuition for Extension Classes is as follows:

\$47.75 a credit:	For 1000-level courses Certificate courses Entrance credit courses Noncredit courses (does not necessarily apply to reduced tuition-courses)
\$50.25 to \$97 a credit:	For 3000-level courses and 5000-level courses; per credit rate depends on tuition of the college offering the credit
\$115 a credit:	For 8000-level courses (open only to students admitted to the University of Minnesota Graduate School): see Graduate Credit , page 20.

A student who concurrently takes summer session day classes and Extension courses during summer terms must register on separate forms and pay both summer session day and Extension fees.

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, computer charges, or audio-visual equipment. Tuition charges and fees do not cover books.

Checks or money orders must be drawn for the exact amount due and made payable to the University of Minnesota.

A \$15 handling fee is charged for all checks returned by a bank. Students should contact the cashier at 138 Wesbrook (624-6354) if they have received notification from their banks that a check has been returned to Extension Classes. No arrangements for partial payment can be made. 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 obtain books from University libraries or to purchase student tickets. Present the white copy to the course instructor at the first class meeting.

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 in 101 Wesbrook Hall, telephone 624-5577, on the Minneapolis campus. Authorizations must include the following:

1. **Proper address:** Department of Extension Classes, University of Minnesota, 101 Wesbrook Hall, 77 Pleasant St. S.E., Minneapolis, MN 55455
2. **Student's name**
3. **Correct amount of tuition and fees** for specific classes
4. **Specific authorization to bill for a late fee** (when applicable), or the student must include a check to pay late fees.
5. **Term or dates of eligibility**
6. **Authorizing signature** or stamp required
7. **Complete address of agency to be billed** for tuition

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

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

All materials should be sent to Extension Classes, University of Minnesota, 101 Wesbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455.

Registration forms must be properly filled out.

Financial Aid Information

Academic Progress

Students with a grade-point average of less than 2.00 or a continuing inability to complete courses successfully might not be considered in "good academic standing." This accumulation of substandard work will jeopardize eligibility for financial aid, veteran's benefits, or other funding programs which require satisfactory academic progress. Insufficient academic progress may also mean failure to meet admission criteria for degree programs or majors both within and outside the University of Minnesota. In addition, the substandard course work may not be transferable to other programs or institutions. Students who are admitted to a degree program at the University of Minnesota will be held to the academic standards of that college. Students are encouraged to contact an Extension adviser at 625-2500 for further information and assistance in reviewing options, study skills, and steps which might improve academic standing.

Delayed Payments

If you are unable to pay your tuition and fees when registering, you may request delayed payment. Only students receiving financial aid through the University of Minnesota Office of Student Financial Aid will be considered for delayed payment of tuition.

To receive delayed payment, you must be in good academic standing, your record at the University must be free of holds, and you must show eligibility for financial aid for the current academic year. In addition, all students except Minnesota State Scholarship and Grant recipients must be admitted to a degree or certificate-granting program.

Students are responsible for completing all necessary financial aid procedures prior to requesting a delayed payment. If you have questions regarding the criteria for granting a delayed payment, contact the Extension Counseling Office at 314 Nolte Center (625-4334) or go to the Financial Aid office at 210 Fraser Hall (624-1665).

Eligible students request delayed payment at the time of registration at 101 Wesbrook Hall (delayed payments are not issued after the second week of the term).

Students registering by mail should:

1. Follow regular mail registration procedures outlined in this bulletin. Be sure to include your social security number and University I.D. number, if you have one, in the space provided on the registration form.
2. In lieu of payment with a check, include a note requesting a delayed payment. Your name will be checked for eligibility.

3. If you have completed all eligibility requirements, expect your delayed payment approval within two to three weeks in the mail. You will also be sent an Extension Bursar Fee Statement, which you will need to pick up your financial aid check.

Students registering in person should:

1. Fill out registration forms following the instructions outlined in this bulletin. Be sure to include your social security number and University I.D. number, if you have one, in the space provided on the registration form.
2. Have your registration forms tallied at the registration desk.
3. Instead of paying at the cashier's office, take your tallied registration forms to the financial aid desk in 101 Wesbrook Hall. Your registration forms will be checked for eligibility.
4. If you have completed all eligibility requirements, your tuition will be delayed and you will be given an Extension Bursar Fee Statement. You will need to show your Extension Bursar Fee Statement to pick up your financial aid check.

Students requesting delayed payment should register during regular registration periods to avoid late fees.

Receiving delayed payment does not guarantee receipt of financial aid. Students who do not receive their expected aid are still responsible for payment of their tuition and fees. 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 29. Students are urged to cancel officially as soon as they decide to drop the course. In most cases, without official cancellation, students are responsible for the total course costs after the fourth class meeting regardless of whether they have been attending class or intended to cancel.

If you pay your own tuition and fees prior to picking up your financial aid check, request an Extension Bursar Fee Statement when you register. You must show it in order to pick up your aid. To qualify for aid and to receive an Extension Bursar Fee Statement, you must apply for aid through the Office of Student Financial Aid at the University of Minnesota, be in good academic standing, and your University of Minnesota record must be free of holds.

Students who drop below the number of credits on which their aid is based may not be able to obtain the aid or may be required to pay back all or part of the award.

Programs

Minnesota Part-Time Student Grant Program—The MPTSGP provides funds for students enrolled for five credits or less during the summer period from June 12 to August 22.

Eligibility requirements are: U. S. citizen or permanent resident of the United States, Minnesota residency; enrollment in undergraduate course work applicable to a degree or certificate program and maintenance of satisfactory academic progress; no prior bachelor's degree; and demonstration of financial need. Tuition and fees, books and supplies, transportation and child care will be considered. Awards are contingent upon state funding. Applications will be accepted until all funds for each term have been committed. Information is available at Extension Counseling, 314 Nolte Center (625-4334).

Eligibility for the first five-week term and ten-week term is based on 1988 income. Eligibility for the second five-week term is based on 1989 income. Under some circumstances, estimated 1990 income may be allowed. Applicant's total federally adjusted gross income and untaxed income must not exceed the following levels:

One-person family \$11,300

Two-person family \$15,125

Three-person family \$18,775

Four-person family \$23,275

Five-person family \$25,000

Six-person family \$26,875

Seven-person family \$28,950

Eight-person family \$30,875

Nine or more \$33,100

Awards can be used for tuition and fees, books and supplies, transportation, and child care costs incurred while students are involved in classes. The grant may supplement other aid, including Pell Grants, scholarships, and employer tuition reimbursement.

Applications will be accepted until all funds for each term have been committed. Information is available from Extension Counseling, 314 Nolte Center, 315 Pillsbury Drive S.E., Minneapolis, MN 55455 (625-4334).

Pell Grant—Summer Pell Grants are available to eligible undergraduates admitted to a University of Minnesota degree or certificate program who did not attend one or more quarters or registered for less than 12 credits in one or more quarters in 1989-90. Students must not have a prior bachelor's degree. For Pell Grant purposes, 6 summer credits is considered half-time enrollment. Students who have not previously submitted a 1989-90 ACT application must do so by May 1, 1990, to be eligible for summer aid. In addition, a Supplemental Summer Application, which will be available during summer registration, is required. Pell Student Aid Reports (SARs) must be turned in by the last day of enrollment. For further information, contact CEE Counseling, 314 Nolte Center (625-4334) or the Office of Student Financial Aid, 210 Fraser Hall (624-1665).

Minnesota State Scholarship and Grant—Summer funding is available to eligible undergraduates who did not attend one or more quarters or registered for less than 12 credits in one or more quarters in 1989-90. Students must not have already earned a bachelor's degree and must not have completed four years of education on a full-time basis beyond high school. Admission is not required, although recipients must be enrolled in course work applicable to a degree or certificate program. Eligible students should have received notification of their eligibility from the Higher Education Coordinating Board earlier in the academic year. For MSSGP purposes, 6 summer credits qualifies as half-time enrollment. Students will be notified when checks are available. Completion of the 1989-90 ACT application is required. For additional information, contact CEE Counseling, 314 Nolte Center (625-4334) or the Office of Student Financial Aid, 210 Fraser Hall (624-1665).

College-Work Study—Summer College Work Study funds are available to eligible undergraduate and graduate students admitted to a degree or certificate program. Undergraduates must be enrolled for a minimum of 6 credits during the summer; graduate students must be enrolled for a minimum of 3 credits. Funds are limited. Students who have not previously submitted a 1989-90 ACT application must do so by May 1, 1990. In addition, a Supplemental Summer Application, which will be available during summer registration, is required. For further information, contact the Office of Student Financial Aid, 210 Fraser Hall (624-1665).

Educational loans—Stafford Loan (formerly called Guaranteed Student Loan), Supplemental Loan for Students (SLS), Parents Loans for Students (PLUS), Student Educational Loan fund (SELF), Health Education Assistance Loan (HEAL), Law Access Loan, and the Law Student Loan are available for summer. All loans require admission to a University of Minnesota degree or certificate program. Six summer credits is considered half-time enrollment. Students who have not previously submitted a 1989-90 ACT application must do so by May 1, 1990, to be eligible for summer aid. In addition, a Supplemental Summer Application, which will be available during summer registration, is required. To be considered for summer 1990 loans, your financial aid file must be complete by July 16, 1990. For additional information, contact CEE Counseling, 314 Nolte Center (625-4334) or the Office of Student Financial Aid, 210 Fraser Hall (624-1665).

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

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

Division of Rehabilitation Services: Some financial aid help may be available through the Minnesota Division of Rehabilitation Services. For information, contact the Office for Students with Disabilities, DRS Liaison, 16 Johnston Hall, 624-4037 (voice or TDD), or the Division of Rehabilitation Services office in your area outside the Twin Cities can also supply you with information.

Blind students may call the Extension registration office (624-5777) 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 (642-0500). Tape and braille materials also are available from the Communication Center of State Services for the Blind, telephone 642-0502.

Special Funds: Students with special needs may contact the Office for Students with Disabilities in 16 Johnston Hall, 624-4037 (voice or TDD), 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).

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

Regents' Scholarships—The Regents' Scholarship program provides an opportunity for eligible University of Minnesota Civil Service and union-represented employees to take University classes tuition-free (graduate student course work subject to taxation). Tuition is waived. Normally, required student services fees do not have to be paid unless you want to purchase and use the service. Regents' Scholarships do not cover retroactive tuition, late fees, course fees, lab fees, books, deposits, records fee for establishing new student files, orientation fees, CEE special fees, or Boynton Health Service fees.

A wide range of courses are approved for Regents' Scholarships, both in day school and Continuing Education and Extension, but note the exceptions listed in the guidelines on the Regents' Scholarship application form.

A separate application must be completed for each course. The applicant's signature as well as the signatures of both the supervisor and department head are required (both signatory spaces must be completed). Applications should be sent to University Personnel, Room 220, Administrative Services Center, 1919 University Ave., St. Paul, MN 55104.

Applications are processed within 48 hours and returned by campus or U.S. mail. There are no exceptions to the processing time and mailing policies; please plan accordingly to avoid late fees. Check with your supervisor for special departmental policies concerning Regents' Scholarships. If you have questions or need additional application forms, please call 624-7054.

For registration information, see **When and How to Register**. Be sure to include the approved Regents' Scholarship form, completed registration form, and a check made payable to the University of Minnesota for special, course, or late fees (if any) when completing registration by mail.

For classes without enrollment limits, registrations with Regents' Scholarship forms will be accepted during the regular registration periods. For classes with limits on enrollment, do not submit registration materials until the second week of mail registration.

Nonrefunds 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 Compleat Scholar classes 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 classes, you may register starting the second week of mail registration. For nonlimited classes, you may register during regular registration periods.

Regents' Scholarships are not accepted for compleat Scholar courses, MacPhail Center courses, Professional Improvement Courses and Seminars, Study and Travel Adventures, Research Explorations, and certain other courses listed on the Regents' Scholarship application form.

University employees on at least a 75-percent appointment may take Compleat Scholar courses for half-price. See the Compleat Scholar section in the **Noncredit Course Offerings** section of this bulletin.

Graduate Assistant Tuition Fellowship Program—Graduate students and professional trainees who hold appointments as teaching assistants, research assistants, administrative fellows, and certain other professional school student positions may receive tuition fellowships for graduate credit classes in Extension. For eligibility information, contact the Graduate Assistants Office, 411 Johnston Hall, 626-1310.

Academic Staff Tuition Benefit—Faculty and professional administrative employees holding faculty appointments of 75-percent or more may register tuition-free in Extension credit classes in which space is available. Approval and employment verification from the

faculty member's department head is required. Only tuition is waived; late fees, course and special fees, books, laboratory fees, and other costs must be paid by the faculty member. Graduate tuition benefits are subject to taxation. Certification forms and eligibility and registration information are available from department heads.

Other financial aids—See the Extension Classes Bulletin, 1989-90 edition, for more information, pages 35-40.

For additional information—Contact Extension Counseling, 314 Nolte Center (624-4334). Financial aid workshops for Extension students will be offered throughout the summer. Call for time, dates, and locations.

Military Information

Personnel

All military personnel are urged to familiarize themselves with the registration procedures and information section of this Bulletin. University regulations and procedures apply to all students unless stated otherwise.

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 up to 90% a quarter credit hour for approved classes. (All classes in the Extension Classes Summer Bulletin are quarter credit whether designated five weeks or ten weeks in 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 should be requested. Registration must be made by mail or in person at 101 Wesbrook Hall, Minneapolis campus.

Veterans

To satisfy Veterans Administration requirements, veterans using VA educational benefits 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 previous college work with a counselor and received a letter verifying the evaluation.** The letter is sent by the veteran or the counselor to the Department of Extension Classes, 101 Wesbrook Hall. Call 625-2500 to arrange for a day or evening appointment.

VEAP (Chapter 32, the Post-Vietnam Era Veterans' Educational Assistance Program), provides benefits to individuals who initially entered active duty after December 31, 1976. While serving on active duty, the serviceperson may voluntarily contribute to an educational assistance fund. Maximum entitlement is 35 months. Application for training under this program may be made by requesting VA form 22-1990. That application form must be completed and submitted to 101 Wesbrook Hall with a certified copy or original copy of DD-214 and information sheet when registering for Extension classes. Payments for veterans using VEAP Chapter 32 benefits is determined by the amount of participants' contributions. DOD "kicker" if any, and number of months the veteran contributed. No payments are made for dependents.

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

Eligibility is based on enlistment in selected reserves for six years between July 1, 1985, and June 30, 1988, having a high school diploma or equivalent before completing Initial Active Duty for Training, having completed 180 days of service either before or after July 1, 1985, and satisfactory participation in required reserve training. No prior bachelor's degree may have been earned.

Entitlement is 36 months of full-time training or the equivalent part-time. Benefits are only payable for full-time (\$140 monthly); three-fourths time (\$105 monthly); and one-half time (\$70 monthly). No benefits are payable for less than one-half time, and no allowance for dependents is made.

Reservists apply by completing form 22-1990 and DD Form 2384, Notice of Basic Eligibility (NOBE), obtained from the reservist's unit. These forms are then submitted with the information sheet to 101 Wesbrook Hall.

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

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

Registration—Before registering, please read **When and How to Register**, page 5. Each time a veteran registers for Extension classes and wishes certification to the Veterans Administration, a G.I. Bill information sheet must be completed. Please complete **only one** information sheet for each registration period.

If the student registers by mail for limited-enrollment classes and any of these classes have 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.**

Submit all forms at the same time: a completed G.I. information sheet (just one listing all classes the student is registering for that term); registration forms (one per class); and a check for tuition plus any additional fees (write a separate check to pay tuition for each limited-enrollment class).

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—For nonstandard terms (such as summer terms), payments vary according to the credits, the amount of class meeting time per week, as well as the Chapter under which the veteran is collecting benefits. Monthly benefits may differ between summer terms and regular academic quarters. Please contact either of the following for more information:

Extension Classes G.I. certification 624-3341
Veterans Administration 726-1454

Advance Pay—Veterans registering for at least one-half time benefits and who have been out of school for at least one full calendar month are eligible for advance pay. This can be requested by filling out an **Advance Payment Request Form** obtained by writing or calling the Veterans Office, 101 Wesbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis, MN 55455, or by filling in person at this office. Request cannot be made later than 30 days prior to the start of classes, nor earlier than 60 days before classes begin. Students who are registering for classes by mail and are submitting a request for advance pay must send all forms in before May 3 for the first 5-week term and 10-week term and before June 11 for the second 5-week term.

Application for advance pay **will not** be accepted later than the following dates:

First 5-week term—May 10

10-week term—May 10

Second 5-week term—June 18

No certification can be sent to the VA earlier than the beginning of each term, regardless of when a veteran registers.

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:

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

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

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

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

Extension Classes G.I. Certification.....	624-3341
Day School G.I. Certification.....	625-8076
Independent Study G.I. Certification.....	624-0000
Program Counseling.....	625-2500
<i>(necessary course work—degree planning)</i>	
Unsatisfactory Progress Problems.....	625-8076

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 a course description. Usually there is no prerequisite for beginning courses. However, courses with two or more parts must be taken in sequence unless otherwise specified. Most advanced courses do have prerequisites and should not be attempted unless the student has had the stated previous course or its equivalent.

Occasionally, students who have had the equivalent study, training, or experience related to the course desired may be exempted from the prerequisite by the instructor.

If 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 (minus a \$5 cancellation fee) 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 must be obtained by the fourth class of the term. To transfer to another class, the student must also have written permission from the instructor of the class he or she is entering if the class has met two or more times. Transfers should only be considered very early in the term. To receive a full refund (minus a \$5 cancellation fee), the student must officially cancel by mail or in person using a cancellation form available from the Extension Classes registration office, 101 Westbrook Hall. Cancellation should be done as early in the term as possible and must be completed by the fourth class of the term. Cancellation after the midpoint of any term may encounter grade recording delays. See **Refunds in Rules, Regulations, and Policies.**

A prerequisite course may not usually be taken for credit after the advanced course has been satisfactorily completed.

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

Academic Progress

Students with a grade-point average of less than 2.00 or a continuing inability to complete courses successfully might not be considered in "good academic standing." This ac-

cumulation of substandard work will jeopardize eligibility for financial aid, veteran's benefits, or other funding programs which require satisfactory academic progress. Insufficient academic progress may also mean failure to meet admission criteria for degree programs or majors both within and outside the University of Minnesota. In addition, the substandard course work may not be transferable to other programs or institutions. Students who are admitted to a degree program at the University of Minnesota will be held to the academic standards of that college. Students are encouraged to contact an Extension adviser at 625-2500 for further information and assistance in reviewing options, study skills, and steps which might improve academic standing.

Grades

A-F Grading System—Five grades, A (highest), B, C, and D (lowest), indicate completion of a course. The grade of F represents performance that fails to meet basic course requirements and is unworthy of credit.

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

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

Choice of A-F or S-N grading system must be indicated for each course listed on the registration form at the time of registration, and **may not be changed after the first week of any 5-week summer term or second week of the 10-week term** (there is no fee for changing). For University of Minnesota graduate students, grade base may not be changed after the first week for summer terms. Changes can be made only in person or by writing the Department of Extension Classes, University of Minnesota, 101 Westbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455. **If the student does not indicate the grading system desired on the registration form, the A-F 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 the next quarter in which the student is registered becomes an F under the A-F grading system or an N under the S-N grading system. When an I is changed to a permanent grade, the I is removed from the student's record. Veterans are advised to read information under **Satisfactory Academic Progress**, page 17.

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 midpoint of any summer term, regardless of the student's standing. After that time, cancellations are permitted only in extenuating circumstances by Scholastic Committee approval. Please contact an adviser at 625-2500 for assistance.

The symbol V (visitor) indicates registration as an auditor or visitor (see **Auditors**, page 23).

Grade-Point Average—For purposes of determining grade-point average, grade points are assigned to the permanent grades as follows: for each credit of A, 4 grade points; B, 3 grade points; C, 2 grade points; D, 1 grade point; F, 0 grade points. A student's grade-point average is determined by dividing the sum of grade points by the sum of credits attempted, and passed. Please contact an adviser at 625-2500 for information about the calculation of your grade-point average. The N grade, for example, is used in determining the average in some colleges but not others.

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

Grade Reports, Transcripts

Two types of service are available to obtain *official* transcripts: regular service and rush service. (Official transcripts are certified and embossed with the University's seal.) Regular service is available for \$2 a copy (increases to \$3, July 1, 1990). Processing time for regular service is two to three workdays; after processing, your copies will be mailed to the places you have specified. Rush service on your official transcript requests is available for \$6 a copy. Rush service guarantees your transcript will be issued to you in person or put in the mail on the same day it is requested. You must have a picture I.D. (student identification card, driver's license, or passport) to receive over-the-counter rush service.

Official transcripts can be requested by mail. Requests can also be dropped off at the locations below. No telephone requests are accepted. Request should include your full name, social security number, date of birth, dates of enrollment, and complete address(es) for mailing the transcripts. Send your requests to the Certifications Unit, 155 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455. Your request must include a check or money order payable to the University of Minnesota for \$2 (\$3 starting July 1) or \$6 a transcript.

You may pick up an unofficial copy of your record by presenting your picture I.D. at the quick-service window in 155 Williamson Hall. There is no charge for the quick-service request; however, there is a limit of one copy per day.

Grades and credits for Extension undergraduates are now automatically recorded on college (day school) transcripts and all previous Extension registrations are transferred to this record. It is no longer necessary to request that your grades be transferred to your day school record. Graduate and professional school students still must petition their school or college if they want Extension credits accepted in their degree programs. Complete a "Request for Transfer" form at the Extension Classes Registration Office, 101 Westbrook Hall, or at the Student Relations Unit, 150 Williamson Hall (625-5333).

Official quarterly reports of students' grades are released only by the University's Office of the Registrar and cannot be furnished by the Extension offices. Grades for each term are mailed from the Office of the Registrar. You should allow four to six weeks from the close of a term for your grades to arrive in the mail. 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.)

A University identification number is assigned to your undergraduate transcript when you register for Extension classes. Extension students *admitted* to a college of the University are eligible for a University I.D. card and are encouraged to obtain one. Always include the I.D. number when you register or complete other University forms. Students not admitted to a college may also obtain an I.D. card (students who register infrequently are less likely to need the card). The I.D. office in 248 Williamson Hall is open weekdays and has some extended hours; call 625-9357 for details. For more information, contact the Extension Counseling Office (625-2500).

Credit and No Credit Registrations

Credits

All credits listed in Course Offerings are quarter credits. All credits are clearly labeled as to use. Each credit usually requires, on the average, a total of three hours a week of a student's time, counting both in-class and out-of-class time.

1. **Degree credit** means that a course may be used on a degree program. A student who seeks a degree should be aware that all degree credits attempted in Extension Classes will be added to the student's college transcript.

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

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

2. **Certificate credit** means that the course so marked may be used in appropriate Extension certificate programs. Certificate credit courses are University-level courses but do not carry degree credit. See page 602 in the 1989-90 **Extension Classes Bulletin** for further information.
3. **Entrance credit** designates a course which may be used to meet University admission requirements.
4. **No credit** means that no credit is given for the course, although grades may be assigned (except for students registered on any reduced, no-credit tuition plan).

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

Graduate School Credit

Students who intend to pursue graduate-level course work through Continuing Education and Extension should be familiar with the instructions in both this bulletin and the graduate School bulletin. A Graduate School bulletin may be requested from the Graduate School, 307 Johnston Hall, 101 Pleasant Street S.E., University of Minnesota, Minneapolis, MN 55455 (625-3014).

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

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

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

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

Course work for the Graduate School's Master of Arts in English and Master of Business Taxation programs may be completed entirely through CEE registration. Students who wish to apply CEE course work toward a Master of Science degree in Food Science should consult with their Director of Graduate Study concerning the number of credits which may be transferred from CEE.

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

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

1. The courses must be completed as an adult special, summer special, or CEE registrant at the University of Minnesota (such course work from other colleges and uni-

versities cannot be transferred), or as a formally admitted and registered student in an accredited graduate school at another university. A student may request that work be transferred from more than one such source, but no more than 40 percent of the total course work may be transferred from any combination of these sources.

2. The courses must have been taken for graduate credit and taught by faculty members authorized to teach graduate-level courses.
3. The courses must be used to satisfy Graduate School degree program requirements. Courses that are not required by the student's degree program cannot be transferred to the Graduate School transcript.

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

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

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

Cee Graduate-Level Registration and fees—A student who wishes to receive graduate-level credit for a CEE course which is available for graduate credit must indicate this on the CEE registration form. This notifies the instructor of the course, who indicates on the final grade report whether the work was completed at the graduate level. If the work was completed at the graduate level, the course is entered onto the student's undergraduate transcript with an asterisk (*) printed next to the course listing.

A student who wishes such work to be transferred to the Graduate School transcript must submit a copy of the undergraduate transcript to the Graduate School when filing the degree program form. The transcript must show that the work was taken for graduate credit, and must indicate a final grade for the work; course work that is "Incomplete" or for which no grade has been submitted cannot be transferred.

In order to change a CEE registration from undergraduate to graduate credit (or the reverse), students must write or go to the Extension Classes Registration Office, 101 Westbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis, MN 55455 (telephone calls are not acceptable). This may be done at any time during the period of instruction. The Graduate School does not permit such changes after the last day of instruction.

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

Students who register for 5000-level course work in CEE usually pay undergraduate CEE tuition rates. If a course is approved for transfer to a University of Minnesota Graduate School transcript, the student must pay the difference between CEE and Graduate School tuition. The tuition differential to be charged will be the difference between the rates in effect at the time the credits are transferred, regardless of when the student registered for or attended the course. If the tuition is not paid, a hold will be placed on the student's Graduate School record by CEE.

Students who register for graduate credit may elect to pay the Graduate School tuition rate when they register for credits that they intend to request be applied toward a University of Minnesota Graduate School degree program. Check with the Extension Classes Registration Office, 101 Westbrook Hall (625-3333) for procedures and for current Graduate School tuition rates.

Use of Graduate-Level Course Work Elsewhere—Students who intend to apply graduate-level CEE course work to a degree at an institution other than the University of Minnesota must indicate on their CEE registration form that they wish to take the course for graduate credit. The faculty member will indicate on the final grade sheet whether the course was taken for graduate credit; if so, this will be entirely the prerogative of the student and the institution to which he or she submits the transcript and is not the responsibility of either CEE or the Graduate School of the University of Minnesota.

Continuing Education Unit

The continuing education unit (CEU) is a nationally recognized unit of measurement awarded to participants in a qualifying noncredit continuing education program. One CEU is ten contact hours of participation under responsible sponsorship, capable direction, and qualified instruction. CEUs can become part of your permanent University record. For a descriptive brochure, contact the Department of Professional Development and Conference Services, 131 Nolte Center, on the Minneapolis campus; telephone 625-6616.

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 alternatives by calling the Continuing Education and Extension Counseling Department, 625-2500. Following is a summary of the various options available.

Independent Study "Y"

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" registration.

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

Extra Credit "X"

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 based on the course level, number of credits, and the college in which the credit is earned. 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, 625-2500.

Directed Studies/Directed Research

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, 625-2500.

Special Examination

Students who, through independent study, experience, or study at a noncollegiate institution, have gained knowledge which is equivalent to that covered by a particular University course, may earn credit for it by passing a special examination on the subject matter covered by the course. They must obtain approval from the department offering the course. There is a \$30 fee. Contact the Counseling Department, 314 Nolte Center, 625-2500.

College Level Examination Program

The College Level Examination Program (CLEP) 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 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, students should contact the Counseling Department, 314 Nolte Center (625-2500) for details.

University College Independent Study

University College provides an undergraduate independent study registration (UC 3075) available to students who wish to pursue projects which go beyond the scope of any single department or college of the University. These student-initiated projects are interdisciplinary in nature and/or are done with faculty from 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, 7 Wulling Hall, 624-2004.

Department of Independent Study

The Department of Independent Study offers a wide variety of courses through correspondence and by radio and television. All requirements can be completed by mail. Courses marked in this Bulletin with **(IS)** following course titles are also taught through Independent Study. Independent Study courses can be used toward fulfilling distribution requirements in most University undergraduate degree programs, and all Extension certificate programs accept such credits. Credits earned through the Department of Independent Study may be used to satisfy residence requirements. Interested degree students should check with their college offices for confirmation. Visa or Mastercard may be used for payment of tuition, fees, or materials. The Independent Study Bulletin is available from the Department of Independent Study, University of Minnesota, 45 Wesbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455; 624-0000.

Auditors

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

Requests for change from credit registration to audit registration are made in person or by writing the Department of Extension Classes, University of Minnesota, 101 Wesbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455; 625-3333.

After the midpoint of a summer 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 re-

quest. The grade-base form (changing from credit to audit) with the instructor's signature must be received before the official start of final exam week for that term. Starting final exam week, it is up to the student to have the instructor place a "V" grade on the grade report. 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 any summer term.

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

Reduced-Tuition Plans

Regular Extension credit courses marked with a diamond (♦) symbol after the course title are open for no-credit registration at reduced tuition.

Registration dates and procedures for ♦ courses are no different than for any nonlimited-enrollment credit class.

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

♦ **One-half price plan**—Any class marked with a ♦ may be taken for no credit at one-half the regular tuition (plus any course fees, special fees, or late fees).

Students will have to pay the regular transfer fee when transferring from one-half price to full price. Students may not transfer from one-half price to full price or full price to one-half price after the first two weeks of class.

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

Youth may register in most Compleat Scholar courses for \$3 only on a space-available basis (after full-tuition students have registered and paid fees). Course fees or special fees must be paid in full.

Advanced high school students who want to take Extension classes for credit should contact an adviser in the Advanced High School Student Services Office, 337 Nolte Center, 626-1666.

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 or twice a week during the day at off-campus locations. Noncredit classes are offered as part of the Compleat Scholar/Practical Scholar curricula and provide participants with an opportunity to continue learning in a wide variety of areas without grades, exams, or extensive homework. See the Compleat Scholar and Practical Scholar sections 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 credit or noncredit Continuing Education for Women courses. 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, 625-2500.

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 (no-credit registration) on a space-available basis. Only tuition is reduced or waived; course fees and special fees, if any, must be paid.

Credit course registration—Credit courses may be taken for University credit for only \$6 a degree, certificate, or entrance credit hour plus any fees. Or these courses may be taken free for no credit (no transcript record is kept). For classes with limited enrollment (those courses with titles printed in red), registrations will be accepted starting the second week of mail registration.

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 fees 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.

Compleat Scholar noncredit classes—Persons 62 and older may register in certain noncredit Compleat Scholar and Practical Scholar classes and receive a \$10 discount on tuition. The tuition cost for persons 62 and older is listed in parentheses after the regular tuition in each course description. (Some courses may not be open to discounted registration.) 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.

For general information, telephone 625-3333.

Also see the description of **Elderhostel**, page 121.

Bookstores

The evening schedule has been established by University bookstores. Note that bookstores are not open every night.

Pick up books before class. Textbooks may be purchased before the first class at campus bookstores. List of course offerings and required books are in the 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 first week of classes provided the student has a sales receipt for the books and has not written in them.

Resale of books: University bookstores will buy back books that will be used in courses in the fall. This sale is conducted throughout the summer.

Summer Hours First Week of Each Term

June 11-14:	8 a.m. to 6 p.m.
June 15:	8 a.m. to 4:30 p.m.
July 19, 23, 24, 25:	8 a.m. to 6 p.m.
July 20:	8 a.m. to 4:30 p.m.

Regular summer hours are 8 a.m. to 4:30 p.m., Monday-Friday.

The Minnesota Book Center, Williamson Hall (telephone 625-6000).

This bookstore (231 Pillsbury Drive S.E.) sells books for courses in the College of Liberal Arts, Education, General College, and the Institute of Technology (*except for those CLA departments listed below in the Harold Smith West Bank campus bookstore*).

Harold D. Smith Bookstore, West Bank (telephone 625-3000).

Located next to Anderson Hall, the West Bank Bookstore 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, theatre arts, studio arts, economics, public affairs, urban studies, music, music education; and for family social science courses taught on the West Bank campus.

Other Bookstores

Books Underground (624-9200), the St. Paul campus bookstore (enter through the student center), and Health Sciences Bookstore (625-8600) at 2-554 Unit A, are also open during the summer. Telephone them for their hours and supplies.

Rules, Regulations, and Policies

Fee Statements

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

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

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

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

Changes in Courses

All changes occurring after the publication of the Bulletin are posted in the desk copy bulletin at each of the registration locations.

Class Attendance

Students (including auditors) are responsible for attending classes in which they are registered. (See also **Credits Without Class Attendance**, page 22.) 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, can do so either in person at 101 Wesbrook Hall, or by mail (call 625-3333 for transfer forms) if space is available. No transfer by mail will be done for reduced-tuition classes.

Students who wish to transfer after an initial registration will be subject to the following transfer fees and conditions: 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 may not transfer from the first 5-week session or the 10-week session to the second 5-week session after June 11.

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

Transfer during the second week or after—After the second class meeting, no transfer will be accepted without written permission of the instructor.

Transfers after the midpoint of the term require scholastic approval.

There will be no transfer fee if: (1) University requests transfer be made; (2) transfer is required because of an unacceptable grade in a prerequisite course (see **Grades**, page 18); (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) transfer is between sections of a course with the same course number.

Students will have to pay the regular transfer fee when transferring from noncredit one-half price registration to full-price credit registration. Students may not transfer from noncredit to credit registration, or vice versa, after the first two weeks of 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**).

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

Veterans—Any veteran registered under the G.I. Bill must notify the Extension Veterans Office, 101 Wesbrook Hall (624-3341), when transferring classes. This is essential when it changes the credit load.

Transfers from Other Colleges

A student may register for Extension classes without going through formal admissions or transfer procedures. However, if students plan to complete a degree program through Extension classes, they must apply and be admitted to a college. Consult the Counseling Department, 314 Nolte Center (625-2500).

Access to Student Educational Records

In accordance with regents' policy on access to student records, information about you generally may not be released to a third party without the student's permission. The policy also permits you to review your 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, academic awards, honors received, 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.

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

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, University of Minnesota, 101 Wesbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455. Cancellations are **not** accepted by telephone. By so doing, they will, if eligible, receive a refund (see **Refunds**, page 29), and will insure entry of the appropriate symbol on their grade report. If students officially cancel within the first week of a 5-week term or within the first two weeks of a 10-week term, the course they cancel will not appear on a transcript.

Students who officially cancel from a class before the dates listed below will automatically receive a "W" (withdrawal) on the grade report. This symbol means official cancellation without a grade." Cancellations by mail are effective the date of the postmark (or date received if sent through campus mail).

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

- First 5-week term July 2
- 10-week term. July 23
- Second 5-week term August 8

Scholastic Committee approval is only granted under unusual circumstances. College guidelines for cancellation will be strongly considered for students who are admitted to a degree program at the University of Minnesota.

Students should obtain a petition form from the registration office in 101 Wesbrook Hall. Instructor verification that the student is doing passing work is required. Completed cancellation forms, the petition form, and instructor's verification must be received by the Extension Classes registration office before the course final exam for that summer term. Students will be notified by mail of the scholastic committee decision.

Cancellation forms are available at the Extension Classes registration office, 101 Wesbrook Hall.

No instructor is authorized to accept cancellation of any registration.

The effective date of cancellation will be the day on which the cancellation is received in the Extension Classes office, regardless of the date of the student's last attendance. (Cancellations by mail are effective the date of postmark or date received through campus mail.) 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.

Students who simply stop attending class (and do not officially cancel) may receive an "F."

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 \$15 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 Hall (624-3341), when canceling a class. This is essential when it changes the credit load.

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

Cancellation by 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 or locations of classes.

Refunds for Summer Classes

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. See cancellation information above. For important deadlines and procedures.

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 27.

1. Full refund of all tuition and fees will be made when a class is canceled by Extension Classes or when the hour or day of the class is changed 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 summer or special term.
 - B. When a student is ill or hospitalized and, in the opinion of a doctor, is unable to continue for medical reasons. The doctor's signed statement on the doctor's letterhead is required and must be submitted by the end of the term.
 - C. To any student who has been recalled to or enlisted in military service upon presentation of military orders, provided the student would not be entitled to an appropriate grade at such 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 Wesbrook Hall or submit the note and a cancellation letter by mail.

It is the student's responsibility to obtain the note and 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 Wesbrook Hall or by mail. Documents must be submitted at the same time before the fourth class meeting.
3. For classes that meet once a week for the 10-week term or twice a week on a 5-week term, refunds of tuition and fees for cancellation of classes after the first class meeting will be made as follows:
 - a. Refund before second class 75%
 - b. Refund before third class 50%
 - c. Refund before fourth class 25%
 - d. Refund after fourth class none
4. For classes that meet twice a week for the 10-week term, refunds of tuition and fees for cancellation of classes after the first class meeting will be made as follows:
 - a. Refund before the third class 75%
 - b. Refund before the fifth class 50%
 - c. Refund before the seventh class 25%
 - d. Refund after the seventh class none

These refund schedules refer to the number of times the class has met, not the number of times the student has attended. The refund schedule differs for fall, winter, and spring classes, and is explained in the academic year bulletin.

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.

Course Numbering

All University courses carry course numbers of four-digit numerals. The first digit indicates the credit level of the course. See sample below:

0000C-0999C	Certificate course
0000-0999	No credit course
1000-1999	Degree credit course primarily for freshmen and sophomores
3000-3999	Degree credit course, primarily for juniors and seniors. Also open to other students with at least C averages overall and in all prerequisite work
5000-5999	Degree credit course primarily for juniors, seniors, and graduate-level students
8000-8999	Degree credit course open only to students who have been admitted to the University of Minnesota Graduate School

To take a course beginning with the numeral 5 (indicating a degree credit course intended primarily for juniors, seniors, and graduate students) or beginning with the numeral 8 (indicating a course intended only for students **admitted** to the University of Minnesota Graduate School) for graduate credit, see *Graduate Credit*, page 20.

Symbols

-	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 on page 5.
†	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 registration is allowed (or required) in courses listed after this symbol.
#	Consent of instructor.
(IS)	Course also available through Department of Extension Independent Study (by correspondence).
◆	Regular credit course open for registration on a noncredit, reduced-tuition plan (see page 24).
⊙	A joint Day/Extension class
▲	Consent of unit offering course is required.
cr	Credit
CEU	Continuing Education Unit (10 contact hours of noncredit learning); see page 22.
Qtr	Quarter
Sem	Semester
Spec	Special Term
S/N	Satisfactory/No credit grading system. See page 18.
A/F	Letter grading system. See page 18.
Prereq	Prerequisite. See page 17.
Lect	Lecture
Rec	Recitation
Sec	Section

Credit Course Offerings

(Noncredit courses are listed beginning on page 92. See Buildings and Maps, pages 127-134; Course Numbering, page 31)

Accounting

(645 Management/Economics: 624-6506)

Carlson School of Management

Summer Accounting courses are offered for seven weeks, although for registration purposes the 10-week term designator is used below. This format applies to both day and evening classes.

The Intermediate and cost accounting courses offered through Extension are numbered identically to those taught in day school. Acct 3105-3106-3107 have been replaced by Acct 3101-3102; Acct 3220-3221 have been replaced by Acct 3201.

- ★Acct 1024 **PRINCIPLES OF FINANCIAL ACCOUNTING I.** 3 credits, §1050, \$143.25 plus \$19 special fee. Total \$157.25. (IS)

Introduction to basic concepts, definitions, and relationships employed in the recording and reporting of business events. **Must be taken A-F.** (No prereq. Limited to 40)

Ten wk Sec 23 **MW**—6-7:55, AmundH 116

Ten wk Sec 24 **MW**—6-7:55, AmundH 120

- ★Acct 1025 **PRINCIPLES OF FINANCIAL ACCOUNTING II.** 3 credits, §1050, \$143.25 plus \$19 special fee. Total \$157.25. (IS)

Introduction to the effects of generally accepted valuations and measurements upon financial statements. **Must be taken A-F.** (Prereq 1024. Limited to 40)

Ten wk Sec 14 **MW**—6-7:55, BlegH 110

Ten wk Sec 15 **MW**—6-7:55, BlegH 120

- ★Acct 3001 (replaces 1051) **MANAGERIAL ACCOUNTING.** 4 credits, §1051, \$230 plus \$19 special fee. Total \$249. (IS 1051)

Accounting analysis and reports for management and investor decision making. Emphasis on planning and control reporting. **Must be taken A-F.** (Prereq 1025 or 1050 and at least 90 cr completed or in progress. Limited to 40)

Ten wk Sec 3 **MW**—6-8:30, BlegH 230

- ★Acct 3102 **ACCOUNTING THEORY AND PRACTICE II.** 4 credits, \$230 plus \$19 special fee. Total \$249.

Concepts and problems in accounting for specific assets and equities. **Must be taken A-F.** (Prereq 3101 and at least 90 cr completed or in progress. Limited to 40)

Ten wk Sec 4 **MW**—6-8:30, BlegH 145

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

- ★Acct 3201 **COST ACCOUNTING (replaces Acct 3220-3221)**. 4 credits, \$230 plus \$14 special fee. Total \$244.

Process and standard costs, behavior of costs under varying conditions, cost allocations, variance analysis, capital budgeting. **Must be taken A-F.** (Prereq 1025, DSci 3055. Limited to 40)

Ten wk Sec 3 MW—6-8:30, BlegH 420, Heslop

- ★Acct 5125 **AUDITING PRINCIPLES AND PROCEDURES**. 4 credits, \$230 plus \$14 special fee. Total \$244.

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

Ten wk Sec 3 MW—6-8:30, BlegH 135, R. Anderson

- ★Acct 5135 **INCOME TAX ACCOUNTING**. 4 credits, \$10130C-0131C, \$230 plus \$14 special fee. Total \$244. (IS)

Individual, partnership, and corporation taxation; emphasizing tax planning. **Must be taken A-F.** (Prereq 1025 and at least 90 cr completed or in progress. Limited to 40. **May not be taken for graduate credit**)

Ten wk Sec 4 MW—6-8:30, BlegH 255

- ★Acct 5180 **ADVANCED ACCOUNTING**. 4 credits, \$230 plus \$14 special fee. Total \$244.

Consolidated statements, fiduciary accounting, partnerships, and foreign exchange. **Must be taken A-F.** (Prereq 3107 or 3102, and at least 90 cr completed or in progress. Limited to 40. **May not be taken for graduate credit**)

Ten wk Sec 3 MW—6-8:30, BlegH 240

Afro-American and African Studies (Afro)

(808 Social Science Tower: 624-9847)

College of Liberal Arts

- ★Afro 3072 **RACISM: SOCIAL-PSYCHOLOGICAL CONSEQUENCES FOR BLACK AMERICANS**. 4 credits, \$5072, \$204.

Racism and its effects on black Americans; definitions, determinants, and dynamics. Examined in an experiential context to reflect individual and institutional racism in milieu of student interest. (No prereq. Meets concurrently with 5072. Limited to 20)

Ten wk Sec 2 W—6:15-8:50, BlegH 225, John M. Taborn

- ★Afro 3601 **INTRODUCTION TO AFRICAN LITERATURE**. 4 credits, \$204.

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

First 5 wk Sec 2 TTh—6:15-8:50, BlegH 260, Charles A. Pike

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

★**Afro 5072 RACISM: SOCIAL-PSYCHOLOGICAL CONSEQUENCES FOR BLACK AMERICANS.** 4 credits, \$3072, \$204.

See course description for Afro 3072. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3072. Limited to 10)

Ten wk Sec 2 **W**—6:15-8:50, BlegH 225, John M. Taborn

American Studies

(104 Scott Hall: 624-4190)

College of Liberal Arts

AmSt 1001 AMERICAN CULTURE. 4 credits, \$191 (♦\$95.50).

◆ *Interdisciplinary study of American cultures, recognizing their ethnic and racial diversity, by using four sources—a related event, literary document, artifact, and place—to help students understand large cultural, sociopolitical, and public policy issues. Origins of American culture through mid-19th century. (No prereq)*

Second 5 wk Sec 3 **TTh**—6-8:30, BlegH 155

AmSt 3111 CREATIVE AMERICANS AND THEIR WORLDS. 4 credits, \$204 (♦\$102).

◆ *A study of the ways in which the works of selected American writers, painters, architects, filmmakers, and other artists can illuminate tensions and conflicts which have arisen out of a dual commitment by Americans to values located in nature and the natural landscape, on the one hand, and, on the other, to values associated with technological progress and ever-higher levels of affluence. "The myth of the garden" in literature and painting. Significance of paintings of urban-technological landscapes. The development of the skyscraper and of the "Chicago School" of modern architecture. The work and ideas of Frank Lloyd Wright. Contemporary issues relating to technology and the environment considered from the perspectives provided by the artists and writers we have studied. Readings of varying lengths from Crevecoeur, Emerson, Thoreau, Mark Twain, Frank Norris, and Tom Wolfe. (No prereq)*

First 5 wk Sec 2 **TTh**—6-8:30, BlegH 155, William H. Agee

AmSt 3920 AMERICAN POPULAR MUSIC. 4 credits, \$204 (♦\$102).

◆ *History of popular music in the U.S. from the first half of the 19th century through the present—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. (No prereq. Meets concurrently with 5920)*

First 5 wk Sec 1 **MW**—6-8:30, AmundH 240, Robert Walser

AmSt 5920 AMERICAN POPULAR MUSIC. 4 credits, \$204.

See description for 3920. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3920)

First 5 wk Sec 1 **MW**—6-8:30, AmundH 240, Robert Walser

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Ancient Studies

(205½ Folwell Hall: 625-2503)

College of Liberal Arts

Field Research into Origins of Cities (AnSt 5110) June 25-July 7

AnSt 5110 (4 credits) is an introduction to theory and method of interdisciplinary field research into growth of complex societies and development of cities, focusing on archaeological and archival study. Includes lectures, demonstrations, laboratory sessions, and training in data recovery. It will be taught at the site of the Late Iron Age urban center of Kelheim in Bavaria, Germany. Fieldwork will focus on archaeological excavation of the Iron Age settlement; lectures and laboratory sessions will be at the Archaeological Museum in Kelheim. The class will meet June 25-July 7 for 4 credits. Qualified students may register for graduate credit at the University of Minnesota.

For information and registration, call the Center for Ancient Studies at 625-2503.

Anthropology

(215 Ford Hall: 625-3400)

College of Liberal Arts

Anth 1101 HUMAN ORIGINS. 5 credits, §1001, \$238.75. (♦\$119.50) (IS)

World prehistory as investigated by anthropologists. Methods and concepts used by anthropologists to study prehistoric human biological and cultural development. (No prereq)

First 5 wk Sec 4 MW—6-9:20, FordH 155

Anth 1102 INTRODUCTION TO SOCIAL AND CULTURAL ANTHROPOLOGY. 5 credits, §1002, \$238.75. (♦\$119.50) (IS)

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

Second 5 wk Sec 4 MW—6-9:20, FordH 155

Architecture

(110 Architecture: 624-7866)

College of Architecture and Landscape Architecture

Noncredit Workshops

Arch 0013 EXPLORING ARCHITECTURE: A CAREER DISCOVERY WORKSHOP. No credit, \$143.25.

Intended for those who are interested in exploring architecture as a possible career path. The course is organized as a seminar workshop, meeting mornings, for a two-week period. Instruction will be an interactive hands-on series of experiences, within a variety of areas of vital interest to the discipline of architecture, including history, theory, skills, and practices. (No prereq)

Spec Term Sec 1 MTWThF—6:30-9, July 23-27, July 30-Aug. 3,
Arch 10, Peter Carlsen

No late fee through July 16.

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

★Arch 0014 **CONSTRUCTION PROCESS: A JOB SITE VISITATION SEMINAR.**

No credit, \$105.

Intended for architectural professionals interested in acquiring a first-hand knowledge of the construction process and the what and how of the trades role in that process. There will be 10 meetings (4 hours each) during which scheduled and coordinated visits will be made to various construction sites to observe and discuss all of the major phases, processes, and techniques from beginning to end. Offered in cooperation with the Minnesota Society, American Institute of Architects, and Associated General Contractors. (No prereq. Limited to 30)

Spec Term Sec 1 **W**—8 a.m.-12, July 11-18, HHCtr 60; July 25-Sept. 12, Arch 35, Arnold Lucke

No late fee through July 3.

★Arch 1010 **INTRODUCTION TO ARCHITECTURE DRAWING.** 4 credits, \$191.

Basic drawing techniques, freehand drawing and sketching, perspective, shades, and shadows. (No prereq. Limited to 25)

First 5 wk Sec 1 **MWF**—5:30-8:30, Arch 45, Andrzej Piotrowski

Arch 5056 **MODERN ARCHITECTURE.** 4 credits, \$ArH 5056, \$248 plus \$4 course fee. Total \$252.

Architecture and urban design from early 19th century sources in Europe and America to World War II. (Prereq 1021 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with ArH 5056.)

Second 5 wk Sec 1 **TTh**—5:30-8:40, Arch 25, Joseph Burton

Arch 5950 **TOPICS IN ARCHITECTURE: ARCHITECTURE FOR EDUCATORS.** 3 credits, \$186 plus \$5 course fee. Total \$191.

Intended for classroom teachers, grades 4 through 12, and others in education. Objective: to introduce educators to how we learn, perceive, and make decisions about our built environment. "Hands-on" activities to help teachers to use the environment as an approach to education. (Prereq teaching experience or #. Qualified students may register for graduate credit at the University of Minnesota.)

Spec Term Sec 2 **W**—6-9:30, June 13, 20, 27, July 11, Arch 30
Sa—9 a.m.-4:30, June 16, 23, Arch 30, James Lammers

Art History

(107 Jones Hall: 624-4500)

College of Liberal Arts

ArH 1008 **CONCEPTS IN ANCIENT ART.** 4 credits, \$3008, \$Clas 3008, \$191 plus \$4 course fee. Total \$195. (♦ \$95.50 plus \$4 course fee. Total \$99.50)

◆ Architecture, sculpture, and painting of selected early cultures; stress on influences contributing to the development of Western art. (No prereq. Meets concurrently with 3008, Clas 3008)

First 5 wk Sec 1 **MW**—6:20-8:50, AndH 310, Sheila McNally

ArH 3008 **HISTORY OF ANCIENT ART.** 4 credits, \$1008, \$Clas 3008, \$204 plus \$4 course fee. Total \$208.

(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Architecture, sculpture, and painting of selected early cultures; stress on influences contributing to the development of Western art. (No prereq. Meets concurrently with 1008, Clas 3008)

First 5 wk Sec 2 MW—6:20-8:50, AndH 310, Sheila McNally

Arth 3013 INTRODUCTION TO FAR EASTERN ART. 4 credits, \$EAS 3013, \$204 plus \$4 course fee. Total \$208. (♦ \$102 plus \$4 course fee. Total \$106).

◆ Major themes of Far Eastern art. The arts of China and Japan (not all-inclusive). (No prereq. Meets concurrently with EAS 3013)

First 5 wk Sec 2 TTh—6:20-8:50, AndH 310, Robert Poor

Arth 3142 ART OF EGYPT. 4 credits, \$Clas 3142, \$204 plus \$4 course fee. Total \$208. (♦ \$102 plus \$4 course fee. Total \$106).

◆ The arts and architecture of Egypt from prehistoric times to the emergence of modern Egypt, with stress on the elements of continuity and of change that have shaped Egyptian culture. (No prereq. Meets concurrently with Clas 3142)

First 5 wk Sec 1 TTh—6:20-8:50, JonesH 207A, Sheila McNally

Arth 5056 MODERN ARCHITECTURE. 4 credits, \$Arch 5056, \$204 plus \$4 course fee. Total \$208.

Architecture and urban design from early 19th century sources in Europe and America to World War II. (Prereq 1021 or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with Arch 5056)

Second 5 wk Sec 1 TTh—5:30-8:40, Arch 25, Joseph Burton

Arts, Studio

(208 Art Building: 625-8096)

College of Liberal Arts

For information about the Split Rock Arts Program, see page 40.

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 625-8096 to make arrangements to hold a place in class. A student who does not make these arrangements and has to cancel the course must obtain a written verification of non-attendance (from the instructor) to be given a 100% tuition refund. Student must turn in this verification at 101 Wesbrook 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. Sculpture and ceramics classes require the rental of a locker for the quarter. A \$15 fee is charged for this: \$6 for the rental and \$9 for a deposit, refundable after the return of the lock. In addition, some courses may also require the purchase of special tools or supplies not included in the tuition of course fees printed below with each offering.

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

- ★ArtS 1101 **BASIC DRAWING.** 3 credits, \$143.25 plus \$5 course fee and \$5 special fee. Total \$153.25.

An introduction to basic drawing methods; exploration of contemporary and traditional methods, various drawing media, work from nature and still life. (No prereq. Limited to 25)

First 5 wk Sec 19 MW—6-9:45, ArtB 141, Myers

Second 5 wk Sec 20 TTh—6-9:45, ArtB 140

Ten wk Sec 21 Th—6-9:45, ArtB 150

- ★ArtS 1102 **DRAWING.** 3 credits, \$143.25 plus \$5 course fee and \$5 special fee. Total \$153.25.

Work from life and nature. Introduction to color and pictorial structure. (Prereq 1101. See Restrictions, page 37. Limited to 25)

Second 5 wk Sec 6 MW—6-9:45, ArtB 150

- ★ArtS 1301 **BASIC SCULPTURE.** 3 credits, \$143.25 plus \$51 course fee and \$5 special fee. Total \$199.25.

Beginning course in metal construction; intensive study of structure with emphasis on form and space. (No prereq. See Restrictions, page 37. Limited to 20)

First 5 wk Sec 4 TTh—6-9:45, ArtB 65, Guy Baldwin

- ★ArtS 1510 **PRINTMAKING: INTAGLIO.** 3 credits each term (maximum 6 cr), \$143.25 plus \$35 course fee and \$5 special fee. Total \$183.25 each term.

Introduction to various techniques of etching and engraving employed in working on metal plates, as well as collagraphic techniques in creative context. (No prereq. Meets concurrently with 3510, 5510. Limited to a combined total of 20)

Second 5 wk Sec 3 MW—6-9:45, ArtB 170, Karl Bethke

- ★ArtS 1601 **VIDEO ARTS PRODUCTION I.** 3 credits, \$143.25 plus \$150 course fee and \$5 special fee. Total \$298.25.

The use of video cameras, microphones, and video recorders, techniques of lighting, sound recording, and editing are explored through lecture, demonstration, and hands-on experience. Work of video artists are viewed and discussed in terms of video theory and technique. Students work in groups to plan, shoot, and edit a short videotape. (No prereq. Limited to 17)

Ten wk Sec 7 M—6-9:45, Intermedia Arts, 425 Ontario, Michael Rivard

Ten wk Sec 8 W—6-9:45, Intermedia Arts, 425 Ontario, David Simpson

- ★ArtS 1602 **ART AND COMPUTERS.** 3 credits, \$143.25 plus \$150 course fee and \$5 special fee. Total \$298.25.

An introductory-level course focusing on the creative use of the Amiga and other microcomputers. This computer graphics course will introduce students to the principles and use of computers and software packages from which they generate images of their own design to be recorded and displayed on videotape. (No prereq. Limited to 17)

Ten wk Sec 5 M—6-9:45, Intermedia Arts, 425 Ontario, Jeffrey Sandeen

- ★ArtS 1603 **PAINT SYSTEM VIDEO.** 3 credits, \$143.25 plus \$150 course fee and \$5 special fee. Total \$298.25.

Introduces basic graphic skills on the Artronics 3M computer (BFA paint system) as well as a variety of traditional painting techniques; and features unique to the com-

(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

puter such as pattern generation and digital recreation of photographic images. Students will complete an animated work. (No prereq. Limited to 17)

Ten wk Sec 6 **W**—6-9:45, Intermedia Arts, 425 Ontario, Melisande Charles

★**ArtS 1701 INTRODUCTION TO PHOTO MEDIUM.** 3 credits, \$143.25 plus \$25 course fee and \$5 special fee. Total \$173.25.

A course in black and white photography for beginners with little or no experience. Lectures on contemporary and historical use of photography. The course will cover techniques in the use of the camera, film development and enlargements. Emphasis on the creative process. Student must have camera. Any 35mm camera is acceptable. If you wish to use a camera other than 35mm and are uncertain whether it will be acceptable, you may check with the Studio Arts department, 625-9532. (No prereq. Limited to 20)

First 5 wk Sec 15 **TTh**—6-9:45, ArtB 120

Second 5 wk Sec 16 **MW**—6-9:45, ArtB 120

(See also photography courses in The Compleat Scholar noncredit section)

★**ArtS 1811 CERAMICS.** 3 credits, \$143.25 plus \$56 course fee and \$5 special fee. Total \$204.25.

Introduction to handbuilding techniques in clay for individual creative expression. (No prereq. Limited to 25)

First 5 wk Sec 4 **MW**—6-9:45, ArtB 10, Curtis Hoard

★**ArtS 1812 CERAMICS.** 3 credits, \$143.25 plus \$56 course fee and \$5 special fee. Total \$204.25.

Introduction to wheel throwing techniques for individual creative expression. (No prereq. Limited to 25)

Second 5 wk Sec 4 **MW**—6-9:45, ArtB 10, Tom Lane

★**ArtS 3105 PAINTING.** 3 credits, \$153 plus \$5 special fee. Total \$158.

Introduction to studio work in painting explores the fundamentals of visual art making via the paint media. Emphasis is on the visual language: volume, texture, color, line, space, light, compositions. Proper attention will focus on concepts and technique and philosophies of painting. (Prereq 1101, 1401, 1404 or #. Limited to 25)

First 5 wk Sec 4 **MW**—6-9:45, ArtB 161

★**ArtS 3120 PAINTING.** 3 credits each term (maximum 12 cr), \$153 plus \$5 special fee. Total \$158.

Continuation of media development and individual problems. (Prereq 1401, 3105. Limited to 25)

Second 5 wk Sec 4 **MW**—6-9:45, ArtB 151

★**ArtS 3160 WATERCOLOR.** 3 credits (maximum 12 cr), \$153 plus \$5 special fee. Total \$158.

Introduction to transparent watercolor. Figure, still life, landscape, and individual directions. (Prereq 1101, 1404, 1401 or #. Meets concurrently with 5160. See **Restrictions**, page 37. Limited to a combined total of 25)

First 5 wk Sec 5 **TTh**—6-9:45, ArtB 141, Malcolm Myers

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

★**ArtS 3510 PRINTMAKING: INTAGLIO.** 3 credits each term (maximum 12 cr), \$153 plus \$40 course fee and \$5 special fee. Total \$198.

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. Limited to a combined total of 20)

Second 5 wk Sec 3 MW—6-9:45, ArtB 170, Karl Bethke

★**ArtS 3615 VIDEO EDITING.** 3 credits, \$153 plus \$150 course fee and \$5 special fee. Total \$308.

This class will develop technical and artistic skills used in video editing. Work from a number of genres will be studied to familiarize students with the range of editing styles, strategies, and technology used. In addition to a number of editing exercises, students' work-in-progress will be critiqued with suggestions made for improving the work in the editing process. (Prereq 1601. Limited to 17)

Ten wk Sec 2 T—6-9:45, Intermedia Arts, 425 Ontario, David Simpson

★**ArtS 5160 WATERCOLOR.** 3 credits (maximum 15 cr), \$153 plus \$5 special fee. Total \$158.

Advanced watercolor techniques, aesthetic directions. Continued development of concepts and individual direction. (Prereq 12 cr of 3160 or #. Meets concurrently with 3160. See **Restrictions**, page 36. Qualified students may register for graduate credit at the University of Minnesota. Limited to a combined total of 25)

First 5 wk Sec 5 TTh—6-9:45, ArtB 141, Malcolm Myers

★**ArtS 5510 PRINTMAKING: ADVANCED INTAGLIO.** 3 credits each term (maximum 15 cr), \$153 plus \$40 course fee and \$5 special fee. Total \$198 each term.

An advanced course in etching, aquatint, mezzotint, 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. Qualified students may register for graduate credit at the University of Minnesota. Limited to a combined total of 20)

Second 5 wk Sec 3 MW—6-9:45, ArtB 170, Karl Bethke



SPLIT ROCK arts program

Duluth, Minnesota

Week-long workshops in the arts at the University's Duluth campus on the hilltops overlooking Lake Superior. Work with nationally recognized artists in a supportive community where

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

you can choose from 45 workshops in a variety of arts areas. Create original prints under the guidance of master printers; work with a master watercolor artist from China; join a leading national choreographer in dance for non-dancers; write for young adults; work with two nationally renowned basketry artists; write a poem, short story, novel, or nonfiction work; do beadwork and quillwork with Native American masters; create a visual or written journal; design quilts; hand-build pottery; explore artmaking's connections to the subconscious; create fabric art; photograph nature or documentary subjects; draw and paint; learn folk arts with master ethnic artists; weave tapestries; make contemporary bead art; and more.

Split Rock is a place of true recreation—refreshment and renewal through experiencing an art form intensively.

Low cost, comfortable apartments and excellent food service are available on campus. Come early or stay on to see Minnesota's favorite summer city and travel the rugged and beautiful North Shore.

Split Rock opens July 8 and new workshops begin each Sunday for six weeks. Graduate or undergraduate credit is available, or you may take any workshop for no credit or grade at reduced cost.

For complete information and your copy of the 1990 Split Rock Arts Program catalog, call 624-6800 or write Split Rock Arts Program, 306 Wesbrook Hall, 77 Pleasant Street S.E., University of Minnesota, Minneapolis, MN 55455.

Biology

(223 Snyder Hall: 624-9717)

College of Biological Sciences

★**Biol 1009 GENERAL BIOLOGY.** 5 credits, \$238.75 plus \$10 course fee. Total \$248.75. (IS)

An introduction to the principles of biology. The cell, metabolism, heredity, reproduction, ecology and evolution. Students must attend lectures on both Tuesday and Thursday and laboratory sessions on both Tuesday and Thursday. (No prereq. High school algebra, chemistry recommended. Limited to 75)

Ten wk Sec 3 Lect TTh—6-7:15, MoosT 2-650, Peifer;

Lab TTh—7:30-9:15, KoltH S177

Business, Government, and Society

(835 Management/Economics: 624-5232)

Carlson School of Management

★**BGS 3004 INTERNATIONAL BUSINESS.** 4 credits, \$230 plus \$14 special fee. Total \$244.

World business with emphasis on the global economy, international concepts, global business structures, comparative cultures and environments, global business strategies, multi-national 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 cr completed or in progress. **May not be taken S-N.** Limited to 40)

Second 5 wk Sec 3 TTh—6-8:45, BlegH 130, Isaac Fox

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Business Law

(645 Management/Economics: 624-6506)

Carlson School of Management

★**BLaw 3058 INTRODUCTION TO LAW, AND THE LAW OF CONTRACTS AND SALES CONTRACTS.** 4 credits, \$8158, \$230 plus \$14 special fee. Total \$244. (IS)

Study of the origin of law, its place in and effect upon society; the history and development of law; the system of courts; and legal procedure. An extensive study of the law of contracts as the basic law affecting business transactions; and the law affecting the sales of goods contracts. (Prereq Econ 1002 or equivalent and at least jr standing for business degree students. **May not be taken S-N.** Limited to 50)

First 5 wk Sec 10 **MW**—6-8:30, BlegH 215, Donald G. Campbell

Second 5 wk Sec 11 **MW**—6-8:30, BlegH 215, Donald G. Campbell

Child Psychology

(104 Child Development: 624-2396)

College of Education

Institute of Child Development

CPsy 1301 INTRODUCTORY CHILD PSYCHOLOGY. 4 credits, \$3309, \$5301, \$191. (IS)

Introduction to the science of child behavior; review of theories and research. (Prereq 5 cr introductory psychology. Meets concurrently with 3309)

Ten wk Sec 4 **T**—6-8:30, BuH 123, Christopher Bennett

CPsy 3309 INTRODUCTORY CHILD PSYCHOLOGY FOR THE SOCIAL SCIENCES. 4 credits, \$1301, \$5301, \$257.

Science of child behavior; review of theory and research; designed for majors in psychology, sociology, and related disciplines; not suggested for child psychology majors. (Prereq Psy 1001. Meets concurrently with 1301)

Ten wk Sec 4 **T**—6-8:30, BuH 123, Christopher Bennett

Classics

(310 Folwell Hall: 625-5353)

Classical and Near Eastern Studies

College of Liberal Arts

Clas 1042 GREEK AND ROMAN MYTHOLOGY. 4 credits, \$191 (◆\$95.50).

◆ The heroes, gods and goddesses of ancient Greece and Rome. The stories of the myths and the stories behind the myths. (No prereq)

First 5 wk Sec 4 **MW**—6:20-8:50, EE/CSci 3-111, Jackson Hershbell

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Class 3008 HISTORY OF ANCIENT ART. 4 credits, §ArH 1008, 3008, \$204 plus \$4 course fee. Total \$208 (♦\$102 plus \$4 course fee. Total \$106).

- ◆ Architecture, sculpture, and painting of selected early cultures; stress on influences contributing to the development of Western art. (No prereq. Meets concurrently with ArH 1008, 3008)

First 5 wk Sec 2 **MW**—6:20-8:50, AndH 310, Sheila McNally

Class 3012 THE WORLD OF ROME. 4 credits, §5012, \$204 (♦\$102).

- ◆ General survey of Roman civilization from its origins to the reign of Constantine. The Roman way of life as seen in art, history, literature, and philosophy. Special attention paid to the Etruscans and to the golden age of Rome under Augustus. (No prereq. Meets concurrently with 5012)

Second 5 wk Sec 2 **M**—6:20-8:50, BlegH 415, Gerald Erickson

Class 3142 ART OF EGYPT. 4 credits, §ArH 3142, \$204 plus \$4 course fee. Total \$208. (♦\$102 plus \$4 course fee. Total \$106).

- ◆ The arts and architecture of Egypt from prehistoric times to the emergence of modern Egypt, with stress on the elements of continuity and of change that have shaped Egyptian culture. (No prereq. Meets concurrently with ArH 3142)

First 5 wk Sec 1 **TTh**—6:20-8:50, BlegH 340, Sheila McNally

Class 5012 THE WORLD OF ROME. 4 credits, §3012, \$204.

See description for 3012. Requires additional work for advanced undergraduate and graduate credit. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3012)

Second 5 wk Sec 1 **M**—6:20-8:50, BlegH 415, Gerald Erickson

The Compleat Scholar

(See page 94)

Composition and Communication

(209 Lind Hall: 625-2888)

College of Liberal Arts

(See also writing courses in English)

You must attend the first class meeting in order to keep your place in the class, unless you obtain approval from the instructor.

★**Comp 1011 WRITING PRACTICE** 1.5 credits, \$238.75. (IS)

Provides guided practice in solving writers' problems through recitation, in-class workshops, and individual conferences. Writing assignments focus on defining purpose, organizing and developing content, analyzing audiences, drafting the whole essay and its parts, and revising and editing so as to master the fundamentals of expository structure and style. After first day of class, consent of instructor is required. (No prereq. Limited to 25)

The Writing Practice requirement is fulfilled by successful completion of Comp 1011. Students whose work does not meet an acceptable standard in
(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

1011 will receive a continuation grade ("X"), and will take Comp 1013 to complete the requirement. Comp 1013 will be taught Fall Quarter 1990.

Ten wk Sec 29 **M**—6-8:50, KoltH S134
Ten wk Sec 30 **T**—6-8:50, KoltH S134
Ten wk Sec 31 **W**—6-8:50, KoltH S134

★Comp 1027 INTERMEDIATE EXPOSITORY WRITING. 4 credits, \$191. (IS)

Focuses on the range of choices writers make based on audience, purpose, and context. Relies on critical reading and a variety of written assignments to improve students' control over their writing and the effect it will have on their intended audiences. (Prereq completion of the Writing Practice requirement, or equivalent; soph standing is recommended. Limited to 25)

Ten wk Sec 12 **M**—6-8:30, HHHctr 60
Ten wk Sec 13 **W**—6-8:30, HHHctr 60

★Comp 3014 WRITING IN THE SOCIAL SCIENCES. 4 credits, \$204. (IS)

Emphasizes writing as a way to communicate knowledge about individual and collective human behavior. Multidisciplinary perspectives on common social issues, description and analysis of quantitative data. Assignments may include the literature review, research proposal, case study, and theoretical argument. (Prereq jr standing, the Writing Practice requirement, or equivalent. Limited to 20)

Ten wk Sec 6 **T**—6-8:30, BlegH 245
Ten wk Sec 7 **T**—6-8:30, BlegH 225
Ten wk Sec 8 **W**—6-8:30, KoltH S135

★Comp 3022 CRITICAL READING AND WRITING FOR MANAGEMENT. 4 credits, \$204.

Strategies and conventions for writing in management and related fields. Improvement of communication skills through the incorporation of narrative, descriptive, analytical and persuasive techniques into writing on current business topics, with an emphasis on critical reading, thinking, and writing. Strategies for communicating among varied audiences in business settings. **This course is the first of two courses required by the Carlson School of Management. It does not fulfill the upper-division composition requirement as defined by most majors in the College of Liberal Arts.** (Prereq the Writing Practice requirement or equivalent. Limited to 20)

Ten wk Sec 1 **W**—6-8:30, BlegH 245

★Comp 3027 ADVANCED EXPOSITORY WRITING. 4 credits, \$204. (IS)

Designed for already competent writers, this course focuses on the production of polished writing within and beyond the university setting. Teaches effective argumentation through critical reading and awareness of context and audience. (Prereq jr standing, the Writing Practice requirement or equivalent. Limited to 20)

Ten wk Sec 13 **T**—6-8:30, KoltH S133
Ten wk Sec 14 **W**—6-8:30, KoltH S133
Ten wk Sec 15 **Th**—6-8:30, KoltH S133
Ten wk Sec 16 **Th**—6-8:30, KoltH S134

★Comp 3031 TECHNICAL WRITING FOR ENGINEERS. 4 credits, \$204. (IS)

Presenting technical information accurately and clearly with attention to the rhetorical and organizational contexts of the writing. Analysis of writing situations, style and form of technical reports, and collaborative written and spoken presentations.

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Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

(Prereq jr standing, the Writing Practice requirement, or equivalent. Limited to 20)

Ten wk	Sec 8 T—6-8:30, HHCtr 60
Ten wk	Sec 9 T—6-8:30, KoltH S135
Ten wk	Sec 10 W—6-8:30, BlegH 350
Ten wk	Sec 11 Th—6-8:30, HHCtr 60
Ten wk	Sec 12 Th—6-8:30, BlegH 350

★**Comp 3032 PREPROFESSIONAL WRITING FOR BUSINESS.** 4 credits, \$204. (IS)

Writing for the wide variety of situations and audiences found in business. Form and style of business writing in collaborative and individual assignments. Assignments and practical examples tied as much as possible to students' major fields. **This is the second of two courses required by the Carlson School of Management.** (Prereq jr standing, the Writing Practice requirement or equivalent. Limited to 20)

Ten wk	Sec 9 T—6-8:30, BlegH 125
Ten wk	Sec 10 T—6-8:30, BlegH 255
Ten wk	Sec 11 Th—6-8:30, BlegH 255
Ten wk	Sec 12 Th—6-8:30, BlegH 125

★**Comp 3033 WRITING FOR THE HEALTH SCIENCES.** 4 credits, \$204.

Addresses the writing needs of students from the diverse fields of the Health Sciences. Primary emphasis on practicing and achieving verbal clarity in a variety of situations ranging from precise description of a clinical procedure to balanced discussion of ethical contexts. (Prereq completion of the Writing Practice requirement or equivalent. Limited to 20)

Ten wk	Sec 2 M—6-8:30, BlegH 245
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Comp 3085 SPECIAL PROJECTS IN ADVANCED COMPOSITION. 1-4 credits, \$51 per credit plus \$40 special fee.

Individual writing conferences scheduled at student's and instructor's convenience. Interested students should contact the Composition Office (209 Lind Hall, 625-2888), and submit a brief written outline of the project, before registering for the class. *This course may not fulfill the upper-division composition requirement as defined by some majors; check with your college office before registering.* (Prereq the Writing Practice requirement or equivalent and written #)

Ten wk	Sec 4 Arr
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Computer Science

(4-192 EE/CSci; 625-4002)

Institute of Technology

Computer Cards

Students will be expected to pay a user fee of \$30 a term for courses that have a formal or an informal laboratory.

★**CSci 3101 A FORTRAN INTRODUCTION TO COMPUTER PROGRAMMING.** 4 credits, \$1100-1101, \$248 plus \$6 special fee. Total \$254. (IS)

Basic FORTRAN computer language with extensions. Programming applications
(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

and techniques. The binary number system and elements of computer organization and machine language. Integral laboratory. (Prereq Math 1111 or 1201 or equivalent or #. Limited to 40)

First 5 wk Sec 10 **MW**—6-8:40, EE/CSci 3115

Second 5 wk Sec 11 **TTh**—6-8:40, EE/CSci 3115

★**CSci 3104 INTRODUCTION TO PROGRAMMING AND PROBLEM SOLVING. 5** credits, \$310 plus \$6 special fee. Total \$316.

Problem-solving techniques, stepwise refinement, modularization. Algorithms, introduction to evaluation criteria, representation of algorithms, flow charts, meta languages. The PASCAL language. Elements of programming style, program checking. Design of test data. Documentation. Comparison of PASCAL/FORTRAN. (Prereq Math 1211 or equivalent or #. Limited to 40)

First 5 wk Sec 10 **TTh**—6-8:40, EE/CSci 3115

Second 5 wk Sec 11 **MW**—6-8:40, EE/CSci 3115

Continuing Education for Women (CEW)

(See page 92)

Dance

(106 Norris Hall: 624-5060)

Department of Theatre Arts and Dance

College of Liberal Arts

Dance (Dnce) courses (numbered through 1499) may be taken S-N. Those numbered 1500 and above may not be taken S-N by Dance students.

★**Dnce 1007 FUNDAMENTAL JAZZ I. 1 credit, \$47.75.**

Basic skills of jazz dance. (No prereq. Limited to 20)

Second 5 wk Sec 4 **TTh**—4:15-6:15, PeikH 65, Zoe Sealy

★**Dnce 1031 BALLROOM DANCE I. 1 credit, \$47.75 plus \$3 special fee. Total \$50.75.**

Elementary steps and variations of the foxtrot, lindy, waltz, tango, cha-cha, rumba, and samba. (No prereq. Sec 5 and 6 meet concurrently. Limited to 25 each section)

First 5 wk Sec 5 **MTWTh**—1:25-2:15, NorrisH 153, Mary B. Lampe (men only)

Sec 6 **MTWTh**—1:25-2:15, NorrisH 153, Mary B. Lampe (women only)

★**Dnce 1077 TAP I. 1 credit, \$47.75.**

The basics of tap, working on fundamental syncopation and various rhythms. (No prereq. Limited to 20)

First 5 wk Sec 2 **MTWTh**—4:15-5:15, PeikH 65, Zoe Sealy

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

- ★Dnce 1110 **TOPICS: FUNDAMENTAL MODERN I.** 1 credit, \$47.75 plus \$7 special fee.
Total \$54.75.

Introduction to fundamentals of modern dance technique. (No prereq. Limited to 20)

First 5 wk Sec 5 MW—4:15-6:15, NorrisH 67, Diane Aldis

- ★Dnce 1110 **TOPICS: FUNDAMENTAL BALLET I.** 1 credit, \$47.75 plus \$7 special fee.
Total \$54.75

Introduction to the fundamentals of classical ballet techniques including barre and center work. (No prereq. Limited to 20)

First 5 wk Sec 6 TTh—5:15-7:15, NorrisH 67, Mary Harding

- ★Dnce 1110 **TOPICS: FUNDAMENTAL MODERN II.** 1 credit, \$47.75 plus \$7 special fee.
Total \$54.75.

Introduction to the fundamentals of modern dance techniques, level two. Emphasis on exploring rhythms and dynamics underlying movement. (Prereq #. Limited to 20)

Second 5 wk Sec 7 MW—4:15-6:15, NorrisH 67, Diane Aldis

- ★Dnce 1110 **TOPICS: FUNDAMENTAL BALLET II.** 1 credit, \$47.75 plus \$7 special fee.
Total \$54.75

Fundamentals of Classical ballet including barre, center work, and combinations; level two. (Prereq #. Limited to 20)

Second 5 wk Sec 8 TTh—5:15-7:15, NorrisH 67, Mary Harding

Design

(240 McNeal Hall: 624-9700)

College of Home Economics

Design, Housing, and Apparel

- ★Dsgn 1201 **INTRODUCTION TO COMMERCIAL ART AND GRAPHIC DESIGN.** 4 credits, \$191.

Overview of advertising communications process, history and contemporary practices. Emphasis on role of commercial artists (in relationship to the business community and the consumer). Terminology and technology of the field are introduced. Field trips. (No prereq. Limited to 28)

First 5 wk Sec 8 TTh—6-8, McNH 216, StP Campus, Fred Klein

- ★Dsgn 1203 **DRAWING FOR DESIGN AND ILLUSTRATION.** 4 credits, \$191.

Fundamentals of drawing for commercial design and illustration. Emphasis on human figure drawing, form, perspective, and shadows. Use of range of commercial art mediums. (Prereq 1521 or #. Limited to 24)

Second 5 wk Sec 4 TTh—6-9:55, McNH 258, StP Campus, Harold Hussung

- ★Dsgn 1523 **DESIGN PROCESS: VISUAL PRESENTATION.** 4 credits, \$191.

Development of basic skills in drawing for the designer. (No prereq. Limited to 24)

First 5 wk Sec 6 MW—6-9:55, McNH 258, StP Campus

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

★Dsgn 1528 (formerly 1521) **DESIGN PROCESS: COLOR.** 4 credits, \$191 plus \$4 course fee. Total \$195.

Study of color concepts and their applications to design. **Students will also be required to purchase supplies for this class which will possibly exceed \$100.** (Prereq 1501, 1523 or 1525 recommended. Limited to 24)

Second 5 wk Sec 4 TTh—6-9:55 and arr, McNH 262, StP Campus

★Dsgn 1531 **SURFACE-FABRIC DESIGN I.** 4 credits, \$191 plus \$35 course fee. Total \$226.

Exploration of surface pattern and composition with varied media and materials: dyeing, resist, batik, stencil, block printing, and others. (Prereq 1521, 1523, 1525 or #. Limited to 18)

First 5 wk Sec 3 MW—6-9:55 and arr, McNH B9, StP Campus,
Richard Abell

★Dsgn 1550 **DRAFTING—BASIC DRAFTING TECHNIQUES.** 4 credits, \$191 plus \$10 course fee. Total \$201.

Architectural drafting instruction in the use of drafting instruments. Emphasis on plans, elevations, details, and architectural symbols and vocabulary as related to Interior Design. **Students will be required to purchase supplies for this class which will probably exceed \$125.** (No prereq. Limited to 24)

First 5 wk Sec 10 MTh—6-9:55 and arr, McNH 305, StP Campus

★Dsgn 3243 **COMMERCIAL ILLUSTRATION III.** 4 credits, \$274.

Further development of individual illustration skills, personal style. Studio experiences in the media and techniques of commercial illustration. Orientation in agency and studio procedures. (Prereq 3242 or #. Limited to 24)

Second 5 wk Sec 2 TTh—6-9:55, McNH 305, StP Campus

★Dsgn 3255 **TYPOGRAPHIC DESIGN.** 4 credits, \$274.

Theory and application of principles of typographic composition. Emphasis on typography history, type faces and letter forms, typesetting methods, terminology, type specification, and copyfitting. (Prereq 1220. Limited to 24)

First 5 wk Sec 2 MW—6-9:55, McNH 333, StP Campus

★Dsgn 3523 **DESIGN PROCESS: VISUAL PRESENTATION II.** 4 credits, \$274.

Continued development of drawing skills for the designer. (Prereq 1523. Limited to 24)

Ten wk Sec 2 Sa—9 a.m.-12:30, Como Park Conservatory, St. Paul,
Richard Abell

★Dsgn 3528 **DESIGN PROCESS: COLOR II.** 4 credits, \$274.

Continued study of color concepts and their application to design. (Prereq 1528, 1523, or #. Limited to 20)

Second 5 wk Sec 3 MW—6-9:55, McNH 262, StP Campus

★Dsgn 3534 **COMPUTER APPLICATIONS TO DESIGN PROBLEMS.** 4 credits, \$274 plus \$5 course fee. Total \$279.

Focuses on solutions to the design process using the Macintosh, IBM, and Amiga computers. Students will gain experience in microcomputers, peripherals, and
(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

software. (Prereq 1523; 1525, 1528 or #. Limited to 12)

First 5 wk Sec 7 **MW**—6-9:55, McNH 69, StP Campus

Second 5 wk Sec 8 **MW**—6-9:55, McNH 69, StP Campus

★**Dsgn 3552 COMPUTER-AIDED DESIGN, DRAFTING SYSTEM I.** 4 credits, \$274 plus \$5 course fee. Total \$279.

Using computer-aided design drafting system. Includes drawing capabilities and dimensioning for drafting floor plans and three-dimensional views. (Prereq 1550 or equivalent. Limited to 20)

First 5 wk Sec 4 **MW**—5:30-9:30, ClaOff 135, StP Campus, Stephen Maniove

★**Dsgn 3572 SPECIAL TOPICS IN DESIGN: POSTER DESIGN.** 4 credits, \$274.

Develop a series of poster designs based on design concepts and principles. (Prereq 1523. Limited to 18)

First 5 wk Sec 2 **TTh**—6-9:55, McNH B3, StP Campus, Silke Wolter

★**Dsgn 3582 FIELD EXPERIENCE IN DESIGN.** 3 credits, \$205.50.

Supervised 60 hours "on site" exhibition installation during August, 1990. Organizational meeting Sat., Aug. 4, 10:30 a.m. at the Creative Activities Building, Minnesota State Fairgrounds, St. Paul. (Limited to 14)

Spec term Sec 1 **Arr**—Richard Abell. *No late fee through July 27.*

★**Dsgn 5571 SPECIAL TOPICS IN APPLIED DESIGN: QUILTS.** 4 credits, \$274.

Design principles applied to one-patch quilts using many different patterned fabrics. Emphasis on color strategies and special effects, visual textures, and working in a series. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

First 5 wk Sec 1 **MW**—6-9, McNH 212, StP Campus, B. Caron

★**Dsgn 5571 SPECIAL TOPICS IN APPLIED DESIGN: COMPLEX WEAVING AND COMPUTERS.** 4 credits, \$274.

A course to make available to advanced students the department's unusual collection of complex looms including a variety of multi-harness treadle looms, a Jacquard loom, and a dobby loom. The course will introduce students to the relationships between these looms and the computer and to the way in which the computer may be used to plan and execute complex weaves. (Prereq 3532 or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 16.)

First 5 wk Sec 2 **TTh**—4-7, McNH 16, StP Campus, S. Baizerman

★**Dsgn 5571 SPECIAL TOPICS: MUSEUMS, ARCHIVES, AND COLLECTIONS AS RESOURCES FOR RESEARCH IN HISTORIC TEXTILES AND COSTUMES.** 4 credits, \$274.

Methods used in direct analysis of historic costume integrated with library and archival research. Direct experience with museum collections and textiles. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

First 5 wk Sec 3 **W**—6-8, McNH 216, StP Campus, C. Jirousek, L. Stack

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134.

Courses and sections in red have limits on enrollment. See page 5.

Early Childhood Studies Program

(Department of Extension Classes, 201 Wesbrook Hall: 625-1088)

Department of Extension Classes

Courses related to Early Childhood Studies can be found in this bulletin listed under Child Psychology and Family Social Science. For information regarding the Early Childhood field, contact Extension Counseling at 625-2500 or the College of Education Student Affairs office at 625-6501. For Prekindergarten/Nursery School licensure, call Lynn Galle at 624-7009.

East Asian Studies

(113 Folwell Hall: 624-0007)

College of Liberal Arts

Chinese (Chn)

No Chn courses offered summer 1990.

Japanese (Jpn)

Jpn 3021-3022-3023 INTERMEDIATE JAPANESE. 5 credits each section, \$255 each section.

Foundation for reading knowledge of Japanese. Review and pattern drill. A concentrated program of study permitting students to earn 15 hours of credit, the equivalent of a full year's sequence in language. **Students must enroll for all three courses and may not enroll in other summer courses. Students must complete three separate registration forms—one each for 3021, 3022, and 3023. Each form is for 5 credits, tuition \$231.25. (Prereq 1013 or 1008 or #)**

Ten wk	3021	Sec 4	MTWThF—8 a.m.-12:05, AgEng 108, HckrH 210, StP Campus
Ten wk	3022	Sec 5	MTWThF—8 a.m.-12:05, AgEng 108, HckrH 210, StP Campus
Ten wk	3023	Sec 6	MTWThF—8 a.m.-12:05, AgEng 108, HckrH 210, StP Campus

East Asian Studies (EAS)

EAS 1463 INTRODUCTION TO EAST ASIA IN MODERN TIMES. 4 credits, \$Hist 1463, 3463, \$191. (◆\$95.50)

Decline of Asian empires; European and American imperialism; Asian responses; nationalism, social revolution, reintegration, modernization in China, Japan, Vietnam, Korea; retreat of European and American empires. (No prereq. Meets concurrently with Hist 1463, 3463)

Second 5 wk Sec 2 MW—6-8:30, BlegH 235, Byron K. Marshall

EAS 3013 INTRODUCTION TO FAR EASTERN ART. 4 credits, \$ArH 3013, \$204 plus \$4 course fee. Total \$208. (◆\$102 plus \$4 course fee. Total \$106)

Major themes of Far Eastern art. The arts of China and Japan (not all-inclusive). (No prereq. Meets concurrently with ArtH 3013)

First 5 wk Sec 2 TTh—6:20-8:50, AndH 310, Robert Poor

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Hmong (Hmg)

★Hmg 1011 **BEGINNING WHITE HMONG**. 5 credits, \$238.75.

Basic listening, speaking, reading, and writing skills. Stress on the development of communication competence and cultural sensitivity. (No prereq. Limited to 15)

First 5 wk Sec 1 **MTWThF**—8 a.m.-12:05, AgEng 105, StP Campus

★Hmg 1012 **BEGINNING WHITE HMONG**. 5 credits, \$238.75.

Development of comprehension skills in listening and reading, writing, and speaking. Communication competence and cultural sensitivity stressed. (Prereq Hmg 1011 or #. Limited to 15)

Second 5 wk Sec 1 **MTWThF**—8 a.m.-12:05, AgEng 105, StP Campus

Economics

(1035 Management/Economics: 625-6353)

College of Liberal Arts

★Econ 1101 (formerly 1002)-1102 (formerly 1001) **PRINCIPLES OF ECONOMICS**. 4 credits each semester, if no credit received for any other beginning economics course. **No credit for new numbers is available if credit was received under old numbers.** \$191 each semester. (IS)

Principles underlying economic activity and the way these principles work out through our economic institutions. **1101: Micro-economics:** demand and supply, competition and monopoly, distribution of income. **1102: Macro-economics:** national income, money and banking, economic growth. (No prereq. Econ 1102 may not be taken prior to 1101, but the two 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**)

Ten wk 1101 Sec 35 **MW**—6-7:20, BlegH 205

Ten wk 1101 Sec 36 **MW**—7:30-8:50, BlegH 205

Ten wk 1101 Sec 37 **TTh**—6-7:20, BlegH 115

Ten wk 1102 Sec 38 **MW**—6-7:20, BlegH 115

Ten wk 1102 Sec 39 **MW**—7:30-8:50, BlegH 115

Ten wk 1102 Sec 40 **TTh**—7:30-8:50, BlegH 115

★Econ 3101 **MICROECONOMIC THEORY**. 4 credits, \$3105 or BGS 3001, \$204.

Behavior of households, firms and industries under competitive and monopolistic conditions. Factors influencing production, price and advertising decisions. **Must be taken A-F.** (Prereq 1101, 1102 or equivalent, 1 qtr calculus or #. Limited to 35)

Ten wk Sec 4 **TTh**—6-7:20, BlegH 220

English

College of Liberal Arts

English Language and Literature courses (Engl)

(207 Lind Hall: 625-3363)

(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

★Engl 1005 INTRODUCTION TO LITERATURE. 4 credits, \$191.

Understanding and enjoying literature. Readings of novels, short stories, poems, and plays. (No prereq. Limited to 36)

First 5 wk Sec 4 MW—6-8:30, BlegH 105, Mark Reschke

Second 5 wk Sec 5 TTh—6-8:30, BlegH 145, James Berg

Engl 1018 INTRODUCTION TO MODERN FICTION. 4 credits, \$191 (♦\$95.50).

◆ Critical discussion of and writing about selected modern novels and stories. Works are selected each term from authors such as Atwood, Drabble, Cather, Ellison, Hemingway, Joyce, Kingston, Lawrence, Morrison, Murdoch, Silko, Woolf, and others. (No prereq)

First 5 wk Sec 4 TTh—6-8:30, BlegH 415, Kari Winter

Engl 1019 INTRODUCTION TO MODERN DRAMA. 4 credits, \$191 (♦\$95.50). (IS)

◆ Critical discussion of and writing about selected modern plays. Typical authors: Ibsen, Shaw, Synge, Chekhov, O'Neill, Williams, Beckett. (No prereq)

First 5 wk Sec 1 TTh—6-8:30, BlegH 215, Charles Sugnet

★Engl 1621 INTRODUCTION TO WOMEN WRITERS. 4 credits, \$191 (♦\$95.50).

◆ Works by several major women writers from Great Britain and the United States.

Novels, short stories, poetry, and drama. (No prereq. Limited to 36)

First 5 wk Sec 3 TTh—6-8:30, BlegH 110, David Cohen

Second 5 wk Sec 4 MW—6-8:30, BlegH 425, Judith Halberstam

★Engl 3241 SHAKESPEARE. 4 credits, \$3243, \$204 (♦\$102). (IS)

◆ Plays from Shakespeare's early and middle periods. *A Midsummer Night's Dream*, *Hamlet*, a history play, and three or four others. (No prereq. Limited to 36)

First 5 wk Sec 3 TTh—6-8:30, KoltH S137, Joyce Sutphen

★Engl 3356 MODERN BRITISH LITERATURE: 1914-1939. 4 credits, \$204 (♦\$102).

◆ Historical survey of important authors, intellectual currents, movements, conventions, genres, and themes. 1914-1939. Typical authors: later Yeats, Eliot, Woolf, Joyce, Lawrence, Huxley, Waugh, Auden, and Thomas. (No prereq. Limited to 36)

First 5 wk Sec 1 MW—6-8:30, CivMinE 202

Engl 3621 BRITISH AND AMERICAN WOMEN WRITERS. 4 credits, \$204.

Reading and discussion of major works by 19th- and 20th-century British and American women poets, playwrights, and fiction writers. (No prereq)

First 5 wk Sec 1 MW—6-8:30, AmundH 104, Paula Rabinowitz

Engl 3671 THE NOVEL. 4 credits, \$204.

The novel as a literary form. Readings of selected works of fiction from the 18th century to the present. (No prereq)

Second 5 wk Sec 2 MW—6-8:30, BlegH 435, Joel Weinsheimer

Engl 3851 THE ENGLISH LANGUAGE. 4 credits, \$5851, \$204 (♦\$102). (IS)

◆ The English language: its structure (phonetics, phonology, morphology, syntax, semantics) and its use (pragmatics, dialect variation, and first language acquisition). (No prereq)

First 5 wk Sec 4 MW—6-8:30, BuH 120, Lillian Bridwell-Bowles

Second 5 wk Sec 5 TTh—6-8:30, BlegH 230, Christopher Anson

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Creative and Professional Writing (EngW)

(204 Lind Hall: 625-6366)

(See also writing courses in Composition)

★**EngW 1102 INTRODUCTION TO FICTION WRITING.** 4 credits, §Engl 1101, §Comp 1101, 1113, \$191. (IS)

Beginning instruction in the art of fiction: characterization, plot, dialogue, and style. Writing exercises to help students generate ideas. Students read and discuss published fiction as well as their own writing. (Prereq writing practice or EngW 1101. Limited to 25)

Second 5 wk Sec 5 TTh—6-8:30, BlegH 150

★**EngW 3103 INTERMEDIATE POETRY WRITING.** 4 credits, §Engl 3104, §Comp 3104, \$204. (IS)

For students with experience in writing poetry. Exercises, experiments, assigned readings, and discussion of students' work. (Prereq EngW 1101, 1103 or equivalent. Limited to 20)

First 5 wk Sec 3 MW—6-8:30, KoltH S137

★**EngW 3110 TOPICS IN CREATIVE WRITING: INTERMEDIATE MEMOIR WRITING.** 4 credits, \$204.

Autobiographical prose writing. Students read memoirs, consider aspects of memory and imagination and the memoir genre, as well as write their own autobiographical pieces. Writing exercises. (Prereq EngW 1101, 1102, 1103 or equivalent. Limited to 20)

Second 5 wk Sec 3 MW—6-8:30, AmundH 104

(See also Compleat Scholar 0600, Creative Writing I)

★**EngW 5130 TOPICS IN ADVANCED CREATIVE WRITING.** 4 credits, \$204.

Advanced writing workshop. Students may work in more than one genre. (Prereq written Δ . Qualified students may register for graduate credit at the University of Minnesota. Limited to 15)

First 5 wk Sec 1 TTh—6-8:30, CivMinE 214, Alan Burns

Writing in England

Summer term (July 3-August 14, 1990) in London and Devonshire; integrates study of poetry and work on individual creative writing projects with theatre visits and guest speakers. The first four weeks of the program will be spent in London; the following two weeks will be in residence at the Arvon Foundation, Devon. Cosponsored by the Department of English. (8-12 credits.) Request graduate credit information. Instructor is Michael Dennis Browne. **For information:** The Global Campus, 106 Nicholson Hall; telephone 625-3379.

Family Social Science

(290 McNeal Hall: 625-1900)

College of Home Economics

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Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

FSoS 1001 DYNAMICS OF FAMILY RELATIONSHIPS. 3 credits, \$1002, \$143.25 plus \$1 special fee. Total \$144.25 (♦ \$71.75 plus \$1 special fee. Total \$72.75). (IS)

- ◆ Applications of behavioral sciences to mate selection, interaction in marriage, and other committed relationships, sex roles, maintaining, and ending of relationships. (No prereq)

Second 5 wk Sec 2 TTh—6-8:30, McNH 198, StP Campus, Elizabeth Robbins

FSoS 1025 PARENTHOOD. 4 credits, \$191 (♦ \$95.50).

- ◆ Differing concepts of family roles—father, mother, son, daughter, sister, brother. Their implications for parent-child and sibling interaction. Effects of parenthood on husband-wife relations. (No prereq)

Second 5 wk Sec 2 MW—6-8:30, McNH 375, StP Campus, Meredith Hansen

(See also Compleat Scholar 0832, Disciplining Your Child)

FSoS 5251 AGING FAMILIES. 4 credits, \$274.

Aging families examined as complex developing systems interacting with a changing social structure. Marital relationships, role changes, and family caregiving issues are studied. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

First 5 wk Sec 1 MW—5:30-8, McNH 375, StP Campus, Daniel Detzner

Alcohol and Drug Counseling Education Program

(299A McNeal Hall: 625-3778)

For information about the Alcohol and Drug Counseling Education Certificate, see the 1989-90 *Extension Classes Bulletin*, page 604. To receive a formal application for the certificate program, write Alcohol and Drug Counseling Education Program, Family Social Science, University of Minnesota, 299A McNeal Hall, 1985 Buford Ave., St. Paul, MN 55108. Or call the program office, 625-3778.

If you do not attend the entire first class session, your space in that class will be forfeited.

★FSoS 3029 COUNSELING SKILLS PRACTICUM I. 4 credits, \$274.

Dyadic role-playing and group exercises in the area of basic counseling skills. Topics include assessment of counselor needs and motivations, non-verbal communication, accurate empathy, self-disclosure, and questioning. Use of video tape to aid students in feedback. Certificate students must take this course A-F. (No prereq. Students interested in graduate credit should see 5029. Meets concurrently with 5029. Limited to a combined total of 20)

Spec term Sec 5 W—6-10, June 13-July 18, McNH 274, StP Campus, and Sa—9 a.m.-5, June 23, McNH 274, StP Campus, Constance Fabunmi.

★FSoS 3032 CHEMICAL ABUSE AND THE FAMILY: AN OVERVIEW. 4 credits, \$274.

Introduction to marriage and family counseling with particular application to the families in which alcohol or drug abuse is a problem. Certificate students must take this course A-F. (No prereq. Students interested in graduate credit should see 5032. Meets concurrently with 5032. Limited to a combined total of 40)

Spec term Sec 3 ThFSa—9 a.m.-5, July 12-14, McNH 274, StP Campus; and Th—6-10, July 19, 26, McNH 274, StP Campus, William Goodman.

No late fee through July 5.

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

FSoS 3034 TOPICS IN ALCOHOL AND DRUG ABUSE. 1-5 credits, \$68.50 a credit. (IS)

Selected readings in alcohol and drug use and problems and evaluation of student's mastery of the assigned study. Requests for permission to register must be made to William J. Goodman, Alcohol and Drug Counseling Education Program, 299A McNeal Hall, 1985 Buford Ave., St. Paul, MN 55108, or call the program office, 625-3778. (Prereq written #. Students interested in graduate credit should see 5034)

Ten wk Sec 4 Arr—Constance Fabunmi
Ten wk Sec 5 Arr—William Goodman

FSoS 3035 CLINICAL INTERNSHIP IN CHEMICAL ABUSE PROBLEMS. 2-18 credits, \$68.50 a credit plus \$25 special fee for each placement.

Also required is a closed class permission slip, which is available by calling the program office at 625-3778. A six-month (1000-hour) rotating clinical internship experience designed to strengthen the student's competencies and skills in several areas of the alcohol and drug abuse continuum of care. Admissions requests must be made to the Internship Coordinator of the Alcohol and Drug Counseling Education Program. Must be taken S-N. (Prereq 3026, 3027, 3028, 3030, 3032, 3037 and written #)

Ten wk Sec 4 Arr—Constance Fabunmi

★FSoS 3037 GROUP THERAPY: THEORY AND PRACTICE. 3 credits, \$205.50.

Lecture, small-group experience, and role playing 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. Certificate students must take this course A-F. (No prereq. Students interested in graduate credit should see 5037. Meets concurrently with 5037. Limited to a combined total of 24)

Spec term Sec 4 ThFSa—9 a.m.-5, June 14-16, McNH 274, StP Campus, William Goodman

FSoS 5008 INTROSPECTIVE WORKSHOP AND CLINICAL SUPERVISION. 1 or 2 credits, \$68.50 or \$137.

Special topics, ethical issues, nonregular program or course in Family Social Science for pre-service or in-service helping professionals. (Prereq 3035 or 5035. Qualified students may register for graduate credit at the University of Minnesota)

Ten wk Sec 4 Arr—Constance Fabunmi

★FSoS 5029 COUNSELING SKILLS PRACTICUM I. 4 credits, \$274.

See course description and prerequisites for 3029. Certificate students must take this course A-F. (Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3029. Limited to a combined total of 20)

Spec term Sec 5 W—6-10, June 13-July 18, McNH 274, StP Campus; and Sa—9 a.m.-5, June 23, McNH 274, StP Campus, Constance Fabunmi.

★FSoS 5032 CHEMICAL ABUSE AND THE FAMILY: AN OVERVIEW. 4 credits, \$274.

See course description and prerequisites for 3032. Certificate students must take this course A-F. (Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3032. Limited to a combined total of 40)

Spec term Sec 3 ThFSa—9 a.m.-5, July 12-14, McNH 274, StP Campus; and Th—6-10, July 19, 26, McNH 274, StP Campus, William Goodman.
No late fee through July 5.

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

FSoS 5034 TOPICS IN ALCOHOL AND DRUG ABUSE. 2-5 credits, \$68.50 a credit.

See course description and prerequisites for 3034. Requests for permission to register must be made to William J. Goodman, Alcohol and Drug Counseling Education Program, 299A McNeal Hall, 1985 Buford Ave., St. Paul, MN 55108, or call the program office, 625-3778. (Qualified students may register for graduate credit at the University of Minnesota)

Ten wk Sec 4 Arr—Constance Fabunmi

Ten wk Sec 5 Arr—William Goodman

FSoS 5035 CLINICAL INTERNSHIP IN CHEMICAL ABUSE PROBLEMS. 2-18 credits, \$68.50 a credit plus \$25 special fee for each placement.

See course description and prerequisites for 3035. Must be taken S-N. (Qualified students may register for graduate credit at the University of Minnesota)

Ten wk Sec 4 Arr

★FSoS 5037 GROUP THERAPY: THEORY AND PRACTICE. 3 credits, \$205.50.

See course description and prerequisites for 3037. Certificate students must take this course A-F. (Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3037. Limited to a combined total of 24)

Spec term Sec 4 ThFSa—9 a.m.-5, June 14-16, McNH 274, StP Campus, William Goodman.

Finance

(735 Management/Economics: 624-2888)

Carlson School of Management

★BFin 3000 FINANCE FUNDAMENTALS. 4 credits, \$230 plus \$14 special fee. Total \$244. (IS)

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. This course concludes by surveying the nation's financial markets. (Prereq Acct 1024-1025 and 1051 or 3001 and at least 90 cr completed or in progress. **May not be taken S-N.** Limited to 40)

First 5 wk Sec 4 MW—6-9, BlegH 425

Second 5 wk Sec 5 MW—6-9, BlegH 150

★BFin 3100 FINANCIAL MANAGEMENT. 4 credits, \$230 plus \$14 special fee. Total \$244.

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 cr completed or in progress. Limited to 40)

Second 5 wk Sec 2 TTh—5:30-8, BlegH 120

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Certified Financial Planner (CFP)

The University of Minnesota no longer offers CFP courses. Classroom training, however, will be available at another Twin Cities area college. For information call (612) 647-5219.

French

(200 Folwell Hall: 624-4308)

College of Liberal Arts

(See also Practical Scholar 0882, French for Travelers)

Reading French. Fren 0001 is specifically designed for individuals who desire only a reading knowledge of the language. The French language requirements for a graduate degree may also be satisfied by successfully passing an examination given at the end of the course. Graduate students should check with their advisers for specific language requirements in their field of study.

Fren 0001 READING FRENCH. No credit, \$191. (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**)

First 5 wk Sec 3 MTh—6-8:30, CivMinE 213

Fren 1104 INTERMEDIATE FRENCH. 5 credits, \$238.75.

Discussion of literary and cultural readings. Grammar review and development of writing skills. (Prereq 1103 or #)

First 5 wk Sec 3 MTh—6-8:50, KoltH S135

Fren 1105 INTERMEDIATE FRENCH. 5 credits, \$238.75.

Cultural and literary readings, progressively less structured discussion leading to free expression of ideas through speaking and writing. (Prereq 1104 or #)

Second 5 wk Sec 3 MTh—6-8:50, KoltH S135

French and Italian

(200 Folwell Hall: 624-4308)

College of Liberal Arts

★Frit 3604 CINEMAS OF THE REAL. 4 credits, \$204.

Film work of major vanguards: surrealism; Vigo, Renoir, Wells, Visconti, Rossellini, De Sica. Course varies in structure. Knowledge of French and Italian helpful but not necessary. (No prereq. Limited to 50)

First 5 wk Sec 2 MW—6-8:30, BlegH 150, Tom Conley

(See also Compleat Scholar 0136, The Language of Film—Film Noir)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

General College courses

(109 Appleby Hall: 625-6663)

PREPARATORY MATHEMATICS PROGRAM

Choosing the first mathematics class in college is difficult but very important. Students want to minimize the number of preparatory mathematics classes that they must take while at the same time maximizing their opportunity for success. Experience indicates that students choose an inappropriate advanced class more often than they choose a more elementary class. Be careful in your choice. Your success depends on your choice.

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, Calculus I (see the Mathematics section of this Bulletin). 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, Pre-calculus (see the Mathematics section of this Bulletin), or possibly GC 0631, Intermediate Algebra, Part 2, which corresponds to second-year high school algebra.

The following rules usually apply: a student who has been out of high school for several years, or who did not have second-year algebra in high school, should register for GC 0625, while a more recent graduate with fair knowledge of algebra should register for GC 0631. A student who knows very little about algebra should register for GC 0643, Basic Mathematics, which covers the same material as first-year high school algebra, while a student with a good background in signed numbers and introductory algebra will want to try GC 0625, Intermediate Algebra, Part 1. A student who lacks background in arithmetic or who suffers from a fear of mathematics should register for GC 0643. With the aid of an instructor, the student is able to progress through arithmetic or introductory algebra at a pace more suited to his or her learning style.

Students will find assistance in the Mathematics Learning and Assessment Center, Appleby Hall 9 (summer hours will be posted outside the room). Tutorial assistance, placement testing in mathematics, and personal help in overcoming mathematics anxiety are available to students registered in any of the General College preparatory mathematics courses.

***GC 0625 INTERMEDIATE ALGEBRA, PART 1.** No credit, \$GC 1445, \$238.75. (IS)

Knowledge of signed numbers, linear equations, polynomials, factoring, fractions, and radicals assumed. Sets, real numbers, linear equalities, linear inequalities, absolute values, polynomials, rational expressions, exponents, roots, systems of equations, word problems. (Prereq GC Math Level D or GC 0621 with grade of C or better or GC 1435. Limited to 30)

Ten wk Sec 4 T—5:30-8:30, ApH 9, Aparna Ganguli

(See also Practical Scholar 0932, Elementary Algebra)

***GC 0631 INTERMEDIATE ALGEBRA, PART 2.** No credit, \$GC 1446, \$238.75. (IS)

Substantial knowledge of linear equations and inequalities, exponents, factoring, roots, and radicals assumed. Rational expressions, radicals, rational exponents, complex numbers, quadratic equations, inequalities, determinants, and matrices, conic sections, functions and relations, exponential and logarithmic functions, sequences, series. (Prereq GC 0625 with grade of C or better. Limited to 30)

Ten wk Sec 9 TTh—5:30-7:30, ApH 303, David Giese

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

★GC 0643 **BASIC MATHEMATICS: PROGRAMMED STUDY.** No credit, \$238.75.

With aid of instructor, topics selected from following: whole numbers, fractions, decimals, percents, signed numbers, formulas, simple graphs, ratio and proportion, sets, properties, equations, inequalities, rectangular graphs, polynomials, factoring, rational expressions, radicals. Offered through Mathematics Learning and Assessment Center. May be repeated as needed. (Prereq 0611 or 0641. Limited to 30)

Ten wk Sec 4 M—5-8, ApH 9, Laura Koch

★GC 1161 **PHYSICAL SCIENCE: SOLAR SYSTEM ASTRONOMY.** 4 credits, \$191.

Introductory survey of solar system: planets, satellites, asteroids, comets, meteorites. Celestial sphere, coordinate systems, time intervals, motion, physical attributes of various members of our solar system; space program findings. Opportunity to observe through University telescope. Four one-hour evening laboratories or independent study project arranged. (No prereq. Limited to 40)

Ten wk Sec 1 Th—6-8:30, Phys 131, Ivan Policoff

★GC 1374 **THE MOVIES: AN INTRODUCTORY COURSE.** 4 credits, \$191.

Films as art forms and as communication media. Students view films in class, may read film scripts, and may attend film showings locally to learn how to analyze films and to recognize their unique characteristics. (No prereq. Limited to 40)

First 5 wk Sec 2 MW—5:30-8, ApH 302, Terence Collins

(See also Compleat Scholar 0136, The Language of Film—Film Noir)

★GC 1421 **WRITING LABORATORY: PERSONAL WRITING.** 4 credits, \$191.

Students write on various topics in response to reading and discussion. Personal help with individual writing problems. Emphasis on clear and effective written expression through extensive writing and revision. (No prereq. Limited to 18)

Second 5 wk Sec 4 TTh—5:30-8, ApH 204, Geoffrey Sirc

★GC 1454 **STATISTICS.** 4 credits, \$191. (IS)

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, correlation, and hypothesis testing. Emphasis on use of statistics in making decisions. (Prereq GC math level D or elementary algebra. Limited to 30)

First 5 wk Sec 4 MW—5-7:30, ApH 303, Joan Garfield

★GC 1461 **ORAL COMMUNICATION: SPEAKING AND CREATIVE THINKING.** 4 credits, \$191 (♦\$95.50).

In conversations, discussions, and prepared speeches, students share ideas, attitudes, and experiences with others; examine how language functions as means of communication. Modes and methods of creative thinking are explored in relation to effective oral communication. Students listen and respond to communication of others and comment on what they see, hear, and feel. (No prereq. Limited to 20)

First 5 wk Sec 4 TTh—5:30-8, ApH 102, Fred Amram

★GC 1513 **PRINCIPLES OF SMALL BUSINESS OPERATIONS.** 4 credits, \$191. (IS)

Environment and management of small business, problems of initiating the business, financial and administrative control, marketing policies, and legal and governmental relationships. Designed specifically for those who plan to own or
(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

operate some form of small business in marketing-related area. (No prereq. Limited to 35)

Second 5 wk Sec 4 TTh—5-7:30, ApH 226, Mary K. Nelson

★GC 1534 PRACTICAL LAW. 4 credits, \$191. (IS)

Common legal problems. Topics include definition and sources of law, formation and discharge of contracts, torts (personal injury and property damage suits), criminal law, bailments, nature and classification of real and personal property, and joint ownership and tenancy. (No prereq. Limited to 30)

Second 5 wk Sec 3 MW—6-8:30, ApH 303, Peter Kahn

★GC 1571 INTRODUCTION TO BASIC AND TO MICROCOMPUTERS. 5 credits, \$238.75 plus \$5 course fee. Total \$243.75 (IS)

Introduction to microcomputers, applications, and elementary programming using BASIC computer language. Topics include description of microcomputers (emphasis on IBM PC), writing simple BASIC programs, using word processor, spreadsheet, and data base manager. Computer assignments done outside of class. Lab arranged. (Prereq elementary algebra or GCPP Math Level D. Limited to 25)

Ten wk Sec 5 T—5-8, ApH 319, Douglas Robertson

★GC 3132 CARDIOVASCULAR ANATOMY AND PHYSIOLOGY. 4 credits, \$201.

Human circulatory system, specifically parts, locations, structures, physiological function, and common pathological conditions. (Prereq 1132 or equivalent. Limited to 40)

First 5 wk Sec 2 MW—5-7:30, SciCB 125, Douglas Dearden

★GC 3374 FILM AND SOCIETY. 4 credits, \$201 plus \$10 course fee. Total \$211.

Ways in which film and society affect each other, social issues raised in films, public attitudes toward film, effect of film on attitudes and behaviors, and how film medium provides illumination and insight into area of society it portrays, such as urban living, minority stereotyping, ethical decisions, aging, marriage and family, politics, sexual mores. (No prereq; 1374 recommended. Limited to 40)

Second 5 wk Sec 2 MW—5:30-8, ApH 302, Robert Yahne

(See also Compleat Scholar 0136, The Language of Film—Film Noir)

★GC 3423 WRITING THE RESEARCH OR SURVEY REPORT. 4 credits, \$201.

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 senior reports. Close and frequent liaison among student, supervisor or adviser in field of concentration, and professor teaching course. **S-N recommended.** (Prereq 1422. Limited to 15)

Ten wk Sec 5 T—6:20-8:50, ApH 223, Jill Gidmark

★GC 3464 COMMUNICATION IN ORGANIZATIONS. 4 credits, \$201.

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, and skills that underlie effective behavior in organizational relationships. (Prereq 1461 or 1465, 5 cr in psychology. Limited to 40)

First 5 wk Sec 2 MW—6:20-8:50, ApH 102, F. T. Benson

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

★GC 3560 **PERSONNEL ADMINISTRATION.** 4 credits, \$201. (IS)

For both generalists and business students—paralegal administrators, small business entrepreneurs, and other future business employers. Covers employee selection, development, evaluation, and compensation. Provides opportunity for students to pursue new job and career openings and suggests ways to function more effectively as employers. (No prereq. Limited to 35)

First 5 wk Sec 2 TTh—5:30-8, ApH 226, Patrick Kroll

★GC 3720 **VIOLENCE IN THE FAMILY.** 4 credits, \$201.

Focus is the form and amount of family violence. Included are spouse abuse, child abuse, social 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. Limited to 30)

First 5 wk Sec 2 MW—5:30-8, ApH 226, Sander Latts

★GC 3761 **CONSUMER/BUYER BEHAVIOR.** 4 credits, \$201.

Consumer behavior, relation to buying-decision process. Who the consumer is, environment in which he or she operates, internal and external influences. Perception, attitudes, learning, motivation, personality. (Prereq 1551 or #, and at least 75 cr completed or in progress. Limited to 35)

First 5 wk Sec 2 MW—5-7:30, ApH 103, Shari Peterson

Geography

(414 Social Sciences: 625-6080)

College of Liberal Arts

No Geog courses offered Summer 1990.

German

(219 Folwell Hall: 625-2080)

College of Liberal Arts

★Ger 1000 **INDIVIDUALIZED GERMAN FOR NON-DEGREE CREDIT.** 2-5 credits (maximum 5 cr), §1101, \$47.75 per credit.

Emphasis on proficiency according to the national ACTFL system. Reception (listening and reading) emphasized first, followed by production (writing). Each student earns credits at his/her own pace, working with book, computer, and tapes. Teacher available for consultation and testing. The continuation course is 1110 or 1102. (No prereq. Limited to 30)

Ten wk Sec 4 W—6-8:30, WaLib 15

★Ger 1103 **BEGINNING GERMAN.** 5 credits, §1110, \$238.75. (IS)

Third quarter of German language. Emphasis on proficiency according to the national ACTFL system. Reception (listening and reading) emphasized first, followed by production (speaking and writing). (Prereq 1102 or equivalent cr of 1110 or 2 years high school German. Limited to 25)

Ten wk Sec 10 MTh—6-8:30, KoltH S132

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

★Ger 1110 **INDIVIDUALIZED BEGINNING GERMAN.** 1-10 credits (maximum 10 cr), \$1102-1103; 3 credits, \$143.25.

Emphasis on proficiency according to the national ACTFL system. Reception (listening and reading) emphasized first, followed by production (writing). Students work at own pace with book, computer, audio- and videotapes, earning credit through testing as they progress through material. Teachers available for consultation and testing. Two weeks after the end of the session, students who have completed more credits during the session than they registered for should go to the 101 Wesbrook Hall Registration Office to pay for the additional credits. The continuation course is 1104. (Prereq 1101, 5 cr 1000, or placement. Limited to 60)

Ten wk Sec 4 W—6-8:30, WaLib 15

★Ger 3021 **BUSINESS GERMAN.** 4 credits, \$204.

Students learn and use the special terms and expressions needed to deal with everyday situations in business, banking, and personal affairs. This course should be of particular interest to anyone planning to live and do business in Germany. Material includes authentic documents from banks, courts, and public administration. (Prereq 3013 or equivalent. Limited to 25)

Ten wk Sec 2 W—6:20-8:50, BlegH 155, Margrit Zinggeler

★Ger 3641 **INTRODUCTION TO GERMAN FOLKLORE.** 4 credits, \$204. (♦\$102)

The traditional folklore genres; charms (magic), legends, fairy tales, ballads. **Not open for credit toward a major in German.** Requires no knowledge of German. (No prereq. Limited to 55)

First 5 wk Sec 2 MW—6-8:30, HHH Ctr 20, Anatoly Liberman

Reading German. Ger 0221 and 0222 are specifically designed for individuals who desire only a reading knowledge of the language. The German language requirement for an advanced degree may be satisfied by passing Ger 0222 with a grade of "B" or better (0222 must be taken on an A-F basis). Graduate students should check with their advisers for specific language requirements in their field of study.

Ger 0221 **READING GERMAN.** No credit, \$191.

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)

First 5 wk Sec 2 MTh—6-9:20, CivMinE 212, Wolfgang Taraba

Ger 0222 **READING GERMAN.** No credit, \$191.

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. Listening comprehension will be introduced to enhance reading performance. Graduate students achieving a grade of "B" or better in 0222 should bring their Graduate School language certification cards to 219 Folwell Hall for signature. **Must be taken A-F.** (Prereq 0221 or 2 quarters of beginning German or 2 years of high school German)

Second 5 wk Sec 2 MTh—6-9:20, HHHctr 20, Ray Wakefield

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

German in Salzburg

Summer session (July 1-August 11, 1990) integrates intensive German language study and culture courses. This program may be used to fulfill language credit requirements at the University of Minnesota. The program is cosponsored by the Global Campus, Department of Extension Classes, the Center for Austrian Studies, and the Department of German in cooperation with the Goethe Institute. (Up to 7.5 credits.) **For information:** The Global Campus, 106 Nicholson Hall; telephone 625-3379.

History

(614 Social Sciences: 624-2800)

College of Liberal Arts

Hist 1002 INTRODUCTION TO MODERN EUROPEAN HISTORY SINCE THE MIDDLE AGES. 4 credits, §1002H, §3002, \$191 (◆\$95.50). (IS)

◆ Revolution, liberalism, and nationalism from 1715 to 1870. (No prereq. Meets concurrently with 3002)

First 5 wk Sec 4 TTh—6-8:30, BlegH 250, William E. Wright

Hist 1003 INTRODUCTION TO MODERN EUROPEAN HISTORY SINCE THE MIDDLE AGES. 4 credits, §1003H, §3003, \$191 (◆\$95.50). (IS)

◆ 1870 to recent times. (No prereq. Not open to jrs, srs. Meets concurrently with 3003)

First 5 wk Sec 5 MW—6-8:30, BlegH 5, Richard Rudolph

Hist 1301 AMERICAN HISTORY. 4 credits, §1301H, \$191 (◆\$95.50).

◆ Colonial era and early national period from the Revolution through Civil War and Reconstruction. (No prereq)

First 5 wk Sec 3 TTh—6-8:30, AndH 230, David W. Noble

Hist 1302 AMERICAN HISTORY. 4 credits, §1302H, \$191 (◆\$95.50). (IS)

◆ Modern America from 1880 to the present. (No prereq)

Second 5 wk Sec 4 TTh—6-8:30, AndH 350, George Green

Hist 1402 SURVEY OF LATIN AMERICAN HISTORY: 1800-1929. 4 credits, §3402, \$191 (◆\$95.50).

◆ Development of new nationalisms from independence to the emergence of dependent economies. (No prereq. Meets concurrently with 3402)

Second 5 wk Sec 2 TTh—6-8:30, BlegH 250

Hist 1432 HISTORY OF AFRICA: 1800 TO PRESENT. 4 credits, §3432, \$191 (◆\$95.50).

◆ Colonial rule, the forced restructuring and underdevelopment of African economies, African resistance, nationalism, and the problems of independence. (No prereq. Meets concurrently with 3432)

Second 5 wk Sec 2 MW—6-8:30, BlegH 250

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Hist 1463 INTRODUCTION TO EAST ASIA IN MODERN TIMES. 4 credits, \$3463, §EAS 1463, \$191 (♦\$95.50).

◆ Decline of Asian empires; European and American imperialism; Asian responses; nationalism; social revolution, reintegration, modernization in China, Japan, Vietnam, Korea; retreat of European and American empires. (No prereq. Meets concurrently with 3463, EAS 1463)

Second 5 wk Sec 2 MW—6-8:30, BlegH 235, Byron K. Marshall

Hist 3002 INTRODUCTION TO MODERN EUROPEAN HISTORY SINCE THE MIDDLE AGES. 4 credits, \$1002, §1002H, \$204.

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

First 5 wk Sec 4 TTh—6-8:30, BlegH 250, William E. Wright

Hist 3003 INTRODUCTION TO MODERN EUROPEAN HISTORY SINCE THE MIDDLE AGES. 4 credits, §1003, 1003H, \$204.

1870 to recent times. (No prereq. Meets concurrently with 1003)

First 5 wk Sec 5 MW—6-8:30, BlegH 5, Richard Rudolph

Hist 3402 SURVEY OF LATIN AMERICAN HISTORY: 1800-1929. 4 credits, §1402, \$204.

See course description for Hist 1402. (No prereq. Meets concurrently with 1402)

Second 5 wk Sec 2 TTh—6-8:30, BlegH 250

Hist 3432 HISTORY OF AFRICA: 1800 TO PRESENT. 4 credits, §1432, \$204.

See course description for Hist 1432. (No prereq. Meets concurrently with 1432)

Second 5 wk Sec 2 MW—6-8:30, BlegH 250

Hist 3463 INTRODUCTION TO EAST ASIA IN MODERN TIMES. 4 credits, §1463, §EAS 1463, \$204.

See course description for Hist 1463. (No prereq. Meets concurrently with 1463, EAS 1463)

Second 5 wk Sec 2 MW—6-8:30, BlegH 235, Byron K. Marshall

Hist 3722 EUROPE IN THE ERA OF WORLD WAR II. 4 credits, §3224, \$204 (♦\$102).

◆ 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)

First 5 wk Sec 2 TW—6-8:30, BlegH 235

Hist 3821 UNITED STATES IN THE 20TH CENTURY: 1896-1932. 4 credits, \$204 (♦\$102).

◆ The closing of the agricultural frontier and the growth of industrialism, the corporation and the city; populism and progressivism; the end of isolation and the growth of overseas empire; prohibition and women's suffrage. (No prereq)

First 5 wk Sec 3 TTh—6-8:30, MechE 102

Horticultural Science

(305 Alderman Hall: 624-4242)

College of Agriculture

(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Hort 1022 HERBACEOUS PLANT MATERIALS. 4 credits, \$191 (♦\$95.50).

Taxonomy, ecology, and landscape use of perennial and annual flowers, tender and hardy bulbs, ground covers, and wild flowers. Lectures, laboratory, and garden experience. (No prereq)

Second 5 wk Sec 2 **MW**—5-8, Snyder Research and Education Bldg, Minnesota Landscape Arboretum (West of Rt 41 on Hwy 5) Chaska, C. Colston Burrell
(Books available at Arboretum Gift Shop)

Humanities

(314 Ford Hall: 624-5553)

College of Liberal Arts

Hum 1001 HUMANITIES IN THE MODERN WORLD I. 4 credits, §Rhet 1301, \$191 (♦\$95.50). (IS)

◆ Eighteenth-century Europe. Old Regime through French Revolution and Napoleon; new science, Enlightenment, cult of sensibility; rococo, neoclassicism, incipient romanticism. Integrative study of works by creative figures such as Pope, Voltaire, Rousseau, Diderot, Goethe, Watteau, Boucher, Hogarth, David, Goya, Mozart, Haydn. (No prereq)

Second 5 wk Sec 2 **TTh**—6-8:30, FordH 120, Claudia Crawford

Hum 1004 HUMANITIES IN THE MODERN WORLD IV. 4 credits, §Rhet 3381, \$191 (♦\$95.50). (IS)

◆ Europe, 1914-1940. Ideas and forms of society and culture; Leninist, fascist-Nazi, Freudian, neo-orthodox. Expressionism, dada, surrealism. Integrative study of works by creative figures such as Lenin, Freud, Kafka, Eliot, Duchamp, Klee, Kollwitz, Dali, Picasso, Stravinsky, Schönberg, Bartók, Wright, Gropius. (No prereq)

First 5 wk Sec 2 **MW**—6-8:30, FordH 120, George Kliger

Hum 1301 DISCOURSE AND SOCIETY: INTRODUCTION TO METHODS IN THE HUMANITIES. 4 credits, \$191 (♦\$95.50). (IS)

◆ 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)

Second 5 wk Sec 4 **MW**—6-8:30, FordH 120, Barbara Engh

Industrial Engineering/ Operations Research

(125 Mechanical Engineering: 625-0705)

Institute of Technology

IEOR 3000 (formerly IEOR 5000) INTRODUCTION TO INDUSTRIAL ENGINEERING ANALYSIS. 4 credits, §IEOR 5000, \$248.

Scientific management, mathematical models, methods engineering, work measurement, worker satisfaction and participation, wage payment plans, break-even

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Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

analysis, incremental costs, the time value of money and 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)

Second 5 wk Sec 2 MW—6-9, Arch 40, E. Barnett

IEOR 5030 QUALITY CONTROL AND RELIABILITY. 4 credits, \$248.

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 3000 recommended. May not be taken for graduate credit)

First 5 wk Sec 2 TTh—6-9, EE/CSci 3-111, Kevin J. Dooley

Industrial Relations

(537 Management/Economics: 624-2500)

Carlson School of Management

★IR 3002 PERSONNEL AND INDUSTRIAL RELATIONS. 4 credits, \$8002, \$230 plus \$14 special fee. Total \$244. (IS)

An introduction to the human resource management function in organizations. Coverage includes the labor market, recruitment, selection, training, compensation, and labor relations. Topics to be covered are the changing nature of the world of work, emerging legal issues, discrimination in pay and employment, comparable worth, work performance and its assessment, and the effects of technological change on jobs and employment. The course involves lecture presentations, discussion, case studies, and simulation exercises. (Prereq Econ 1001, Econ 1002, Psy 1001; and at least 90 cr completed or in progress. Limited to 65)

First 5 wk Sec 5 MW—6-9, BlegH 10

IR 3010 THE INDIVIDUAL IN THE ORGANIZATION. 4 credits, \$230 plus \$14 special fee. Total \$244.

An introduction to the human side of organizations, focusing on workers and how they enter and succeed in the work setting. Coverage includes theories and techniques of employment interviewing; training needs analysis; career planning; management development; turnover, out-placement, and retirement; understanding leadership roles and styles; work motivation, organization culture and job design; and planning for change. Course involves lecture presentations, discussion, case studies, and simulation exercises. (Prereq at least 90 cr completed or in progress)

Second 5 wk Sec 5 MW—6-9, BlegH 220

Information and Decision Sciences

(395 Humphrey Center: 624-8030)

Carlson School of Management

Courses in the IDSc area make up a program designed for students with a variety of backgrounds:

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

1. Undergraduates in the Carlson School or other schools who want one or more IDSc courses as electives.

2. Working students who want IDSc electives or an information technology-focused emphasis program as part of their mid-career education, but who are not necessarily working toward a degree.

3. Undergraduate Carlson School business majors who want to focus on information technology in a self-designed emphasis program as part of their Carlson School B.S.B. degree.

Starting Points

Students who have been accepted into, or who plan to apply to the Carlson School, should begin with the Core Courses of IDSc 1010, OMS 1020, and IDSc 3030. IDSc 3030 is a requirement for Carlson School students as part of the B.S.B. program.

Core Courses

This sequence of three courses (IDSc 1010, OMS 1020, IDSc 3030) is intended to help students develop the capability to acquire, analyze, and manage data as business professionals. The courses are a mix of skill development and general knowledge in information technology.

★IDSc 1010 (formerly MSci 1010) FUNDAMENTALS OF INFORMATION DEVELOPMENT AND USE. 4 credits, \$MSci 1010, \$191 plus \$14 special fee. Total \$205.

Meeting information needs of managers. Sources of data, data collection methods, data organization and presentation. Descriptive statistical analysis methods. Lab instruction to provide skill development in word processing and spreadsheet analysis on personal computers. (Prereq 30 credits, pre-management student, Math 1111 or 11111. Limited to 45)

Ten wk Sec 16 T—Lect, 5:30-8:15, BlegH 205

Th—Lab, 5:30-6:30, BlegH 90

OMS 1020 DATA ANALYSIS AND STATISTICAL INFERENCE FOR MANAGERS. See page 78.

★IDSc 3030 (formerly MSci 3030) INFORMATION SYSTEMS AND INFORMATION MANAGEMENT. 4 credits, \$MSci 3030, \$MIS 3100, 5100, 3101, 3300, 5101. \$230 plus \$14 special fee. Total \$244.

Defining information requirements. Developing information systems applications. Using information systems. Defining data structures and building and using databases. Formulating database retrievals. Building and using models and expert systems to support decision making. Obtaining external data to support model building and decision making. Evaluating information. Skill development in database software. *This course is equivalent to MIS 3100, 5100, 3101, 3300, and 5101.* (Prereq IDSc 1010 and OMS 1020. Limited to 30)

Ten wk Sec 5 Th—Lect, 5:30-8, HHHctr 30

Th—Lab, 8-9, HHHctr 35

Computing Software Courses*

The use of computing software is fundamental to many courses in the School of Management. To acquire these skills, several courses are available.

No more than 3 credits of IDSc 1070-1076 may be applied to a B.S.B. degree.

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

★IDSc 1070 (formerly MIS 1070) **ORIENTATION TO COMPUTER SOFTWARE AND PROGRAMMING.** 1 credit, §MIS 1070, MIS 3300 or MSci 1010, \$47.75 plus \$50 special fee. Total \$97.75

Intended for Carlson School of Management students and persons seeking to learn to use computer software and program computer applications for business. Provides instruction on software alternatives and how to use software effectively. The course surveys software packages and computer languages as a gateway to the IDSc 1071-1076 series. *Students who can demonstrate proficiency or otherwise evidence mastery of software and programming may waive this course and proceed into the IDSc 1071-1076 series. Must be taken S-N.* (No prereq. Limited to 45)

First 5 wk Sec 4 M—5:30-7:30, BlegH 90

★IDSc 1071 (formerly MIS 1071) **ELECTRONIC SPREADSHEETS.** 1 credit, §MIS 1071, \$47.75 plus \$50 special fee. Total \$97.75.

Focuses on concepts and uses of electronic spreadsheets, benefits and limitations, using examples applicable to accounting, finance, management, and marketing. Lotus 1-2-3 is used to illustrate spreadsheet practice. **Must be taken S-N.** (Prereq IDSc 1070 or MIS 1070 or proficiency exam or waiver based upon equivalent experience. Limited to 30)

Second 5 wk Sec 4 T—5:30-8, HHCtr 35

★IDSc 1073 (formerly MIS 1073) **BUSINESS GRAPHICS SOFTWARE.** 1 credit, §MIS 1073, \$47.75 plus \$50 special fee. Total \$97.75.

An overview of graphics software packages commonly used in business, such as desktop publishing, presentation graphics, business graphs and charts, and CAD. Students will use both IBM MS DOS- and Macintosh-based systems to develop technical skills and an understanding of graphic design considerations and problems. Attention also will be given to the microcomputer systems, including printers, that are appropriate to graphics applications. **Must be taken S-N.** (Prereq IDSc 1070 or MIS 1070 or proficiency exam or waiver based upon equivalent experience. Limited to 30)

Second 5 wk Sec 2 W—5:30-8, HHCtr 35

***NOTE:** *There is an optional computer service fee for those students who do not have access to a micro, and who need to use this service. Registered students may pay this fee by purchasing a \$30 computer card at any Bursar's Office; the West Bank Bursar's Office is in Anderson Hall (8 a.m. to 3:30 p.m.), telephone 625-1383. The fee also may be paid at the Extension Classes Cashier's Office in 138 Westbrook Hall. This office is open until 8 most evenings Monday through Thursday early in each term. When the office is not open in the evening, cards are available for purchase (payment by personal check required) at the Information Desk in the Registration Office, 101 Westbrook Hall. Refunds on cards are available only at the Bursar's Office.*

Programming Courses: IDSc 1075 and 1076 Course Procedures

In these programming courses, students learn to program by writing programs guided by the systematic courseware. Regular lectures are held the first two weeks of the quarter to orient the student to computing facilities and the basics of structured program design. Thereafter a student need attend sessions only (1) to take an exam, or (2) to seek assistance on a programming problem. Satisfactory completion of a programming module entails four programs and four exams. After the first week of class, students may not register without the instructor's permission. After the first two class sessions, students may choose any of the scheduled sections for consultation and exams.

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

★IDSc 1075 (formerly MIS 1075) **ELEMENTARY COBOL**. 2 credits, \$MIS 1075, 3098, \$95.50 plus \$50 special fee. Total \$145.50.

Introduction to programming in COBOL, a widely used business data processing language. In self-paced units, students complete a structured set of COBOL programs and tests. **See Course Procedures above. Must be taken S-N.** (Prereq IDSc 1070 or 11070 or MIS 1070 or proficiency exam or waiver based upon equivalent experience. Meets concurrently with 1076. Limited to 50)

Ten wk Sec 4 **M**—5:30-7:30, AndH 270

★IDSc 1076 (formerly MIS 1076) **INTERMEDIATE COBOL**. 2 credits, \$MIS 1076, 5098, \$95.50 plus \$50 special fee. Total \$145.50.

Advanced features of COBOL. Students complete a structured set of COBOL programs and tests on or before a scheduled date on a self-paced basis. **See Course Procedures above. Must be taken S-N.** (Prereq IDSc 1075 or 11075 or MIS 1075 or MIS 3098 or proficiency exam or waiver based upon equivalent experience. Meets concurrently with 1075. Limited to 50)

Ten wk Sec 4 **M**—5:30-7:30, AndH 270

NOTE: *Students taking upper division Carlson School courses through CEE should have the equivalent of 90 quarter college credits with a "B-" grade average.*

Insurance

(735 Management/Economics: 624-2888)

Carlson School of Management

(See also Finance)

No Ins courses offered summer 1990.

International Relations

(248 Social Sciences: 624-9353)

College of Liberal Arts

No IntR courses offered summer 1990.

Journalism

(111 Murphy Hall: 625-9824)

College of Liberal Arts

Jour 1001 INTRODUCTION TO MASS COMMUNICATION. 2 credits, \$95.50 (♦\$47.75). (IS)

◆ Nature, functions, and responsibilities of communication media and agencies examined from point of view of professional journalist. News, opinion, entertainment, and persuasion functions; current trends. Specialized communication; aspects of advertising. **May not be taken S-N.** (No prereq)

Second 5 wk Sec 5 **TTh**—6:20-8:50, MurH 311

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Jour 1002 VISUAL COMMUNICATION. 2 credits, \$95.50 (♦\$47.75).

- Study of form, content, and meaning in visual communication. Introduction to basic visual elements and techniques. Issues in perception, picture use, and the sources of visual conventions. Attention to the organization and production of visual media. Applications to photography, film, television, advertising, and documentary work. **May not be taken S-N.** (No prereq)

Second 5 wk Sec 4 MW—6-9, MurH 105

Jour 3201 PRINCIPLES OF ADVERTISING. 4 credits, \$204 (♦\$102).

- Theory, principles, and functions of advertising; its role in economic, social, and marketing structure. Newspapers, magazines, radio, television as advertising media. **May not be taken S-N.** (No prereq)

Second 5 wk Sec 3 TTh—6:20-8:50, MurH 308

★Jour 5159 CASE STUDIES IN PUBLIC RELATIONS. 4 credits, \$204.

Case study approach in applying public relations principles to solve problems in business, government, education, and community. Designed to enable students to sharpen their perceptions, insights, and judgments in examining practical and ethical questions. **May not be taken S-N.** (Prereq professional journalism major status or #, Jour 3159, Δ. Inquire about graduate credit at the time of registration. Limited to 25)

First 5 wk Sec 2 TTh—6-9, MurH 308

Jour 5721 MASS MEDIA IN A DYNAMIC SOCIETY. 4 credits, \$204 (♦\$102).

- Economic, political, and social determinants of character and content of mass communication in America. Impact, structure, functioning of mass media. Problems, prospects, criticism. Professionalism, technology, reform. **May not be taken S-N.** (Prereq 16 cr in social science depts or #. Inquire about graduate credit at the time of registration)

First 5 wk Sec 3 MW—6:20-8:50, MurH 308

Jour 5801 INTERNATIONAL COMMUNICATION. 4 credits, \$204 (♦\$102).

- Global telecommunications, channels, artifacts of international mass communication. Problems in free flow of information. Roles of international organizations, journalism. Mass communication in social, political, educational, economic development; implications for conflict resolution. **May not be taken S-N.** (Prereq 16 cr in social science departments or #. Inquire about graduate credit at the time of registration)

Second 5 wk Sec 2 MW—6:20-8:50, MurH 308

★Jour 5990 SPECIAL TOPICS IN MASS COMMUNICATION: DOCUMENTARY PHOTOGRAPHY. 6 credits (8 cr maximum), \$306 plus \$30 course fee. Total \$336.

Intensive three-week professional course in documentary photography. Individual photo projects will focus on subjects based in the Twin Cities community, and lecture topics will include researching photo stories; gaining access to subjects and establishing rapport; photo editing and publication. Additional topics to be discussed will concern the marketplace for documentary photography and photojournalism; implications of new image technologies; and alternative avenues of photo distribution. **Guest lecturers: Peter Howe**, Director of Photography, *Life* magazine; **Eugene Richards**, Magnum Photos (subject to availability). (Prereq 5303 or #; portfolio review required. Inquire about graduate credit at the time of registration. Limited to 16)

Spec Term Sec 1 MTWThF—8 a.m.-4, June 12-July 2, MurH 20,
Dona Schwartz

(See also Compleat Scholar 0134, Photography Workshop)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Landscape Architecture

(205 North Hall: 625-8285)

College of Architecture and Landscape Architecture

★LA 3094 **SKETCHING FOR DESIGNERS.** 2 credits (sec 1 and 2), \$124. 4 credits (sec 3), \$248.

A studio course in analytical and representational sketching for landscape architecture students, architecture students, and environmental design professionals. Instruction and practice exercises will focus on basic drawing techniques, visual note taking, and freehand perspective. Class size allows for instruction to adjust to varied levels of experience with an emphasis on the needs of beginning students. (No prereq. Sec 1 meets concurrently with Sec 3; Sec 2 meets concurrently with Sec 3. Limited to a combined total of 15 students in Sec 1 and Sec 3 and in Sec 2 and Sec 3)

First 5 wk	Sec 1 (2 cr)	T—5:30-8:30, Arch 40, Stacy Moriarty
Second 5 wk	Sec 2 (2 cr)	T—5:30-8:30, Arch 40, Stacy Moriarty
Ten wk	Sec 3 (4 cr)	T—5:30-8:30, Arch 40, Stacy Moriarty

LA 5117 **PLANTING DESIGN: AESTHETIC AND FUNCTIONAL CRITERIA.** 4 credits, \$248.

Lectures, presentations, field trips, reading, and projects exploring aesthetic and functional design principles related to use of plant materials in the landscape. Exploration of both historic and modern principles through design projects of various scales. (Prereq Hort 1021 or #. May not be taken for graduate credit)

Second 5 wk Sec 1 **MWTh**—6:30-8:30, NorthH 305, StP Campus, Peggy Sand

★LA 5119 **PLANTING DESIGN: ECOLOGICAL PRINCIPLES/LAND USE CONCEPTS AND IMPLEMENTATION.** 4 credits, \$248.

Lectures, presentations, field trips, readings, and projects related to the principles and practices of using plants in an ecologically sound and environmentally sensitive manner. Principles derived from prairie, north woods, riverine, and wetland environments. Integration of naturalized materials within a range of environments. (No prereq. May not be taken for graduate credit. Limited to 20)

First 5 wk Sec 1 **MWF**—5-9, NorthH 305, StP Campus, Bonnie Harper

Latin

(310 Folwell Hall: 625-5353)

College of Liberal Arts

Lat 1101-1102-1103 **LATIN.** 5 credits each term, \$238.75 each term. (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 and with 1104. Students are divided into study
(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

groups, which meet two hours each week; one hour is arranged between 5 and 7 p.m. Monday, and the other between 5 and 7 p.m. Wednesday. The entire class will meet from 5 to 7 p.m. the first class of the term in FolH 303. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103)

First 5 wk 1101 Sec 10 **MW**—5-7, AmundH 156, 158, 162
Robert Sonkowsky

First 5 wk 1102 Sec 11 **MW**—5-7, AmundH 156, 158, 162
Robert Sonkowsky

First 5 wk 1103 Sec 12 **MW**—5-7, AmundH 156, 158, 162
Robert Sonkowsky

Lat 1104 LATIN READINGS: CAESAR. 5 credits, \$238.75. (IS)

Reading in Book I of Julius Caesar's masterpiece *The Gallic Wars*. One-hour study groups on Mondays and Wednesdays arranged between 5 and 7 p.m. The entire class will meet from 5 to 7 p.m. the first class of the term in FolH 303. Meets concurrently with 1101-1102-1103. (Prereq 1103 or #)

First 5 wk Sec 4 MW—5-7, AmundH 156, 158, 162, Robert Sonkowsky

Lat 3420 (formerly 3120) CLASSICAL, BIBLICAL, LATER CHRISTIAN, SECULAR LATIN. 5 credits, \$255 (♦\$127.50).

Survey of Latin literature from earliest through renaissance periods and study of selections from Roman republican and imperial literature, the vulgate *Bible*, medieval and renaissance literature. Different selections will be studied each time the course is offered. Course may be repeated for credit. (Prereq 1104 or 1122 or 3052 or #)

First 5 wk Sec 1 MW—7-9, HHCtr 30, Robert Sonkowsky

Learning and Academic Skills

(104 Eddy Hall: 624-3323)

College of Liberal Arts

A student who does not attend the first class meeting of a LASK course will not be allowed to continue. A written verification of non-attendance must be obtained from the instructor for a student to receive a 100% tuition refund.

★**LASK 1001 BECOMING A MASTER STUDENT.** 2 credits. (Credits do not count toward a B.A. degree.) \$95.50 plus \$30 special fee. Total \$125.50. (IS)

Practical assistance to the student in developing efficient study habits, organizing materials, preparing for examinations, and improving the speed and comprehension of reading. Diagnosis and practice in basic skill areas such as reading, spelling, vocabulary, and elementary composition also are provided. (No prereq. Limited to 30)

Ten wk Sec 7 W—6-8:30, WullH 130

Linguistics

(142 Klaeber Court: 624-3528)

College of Liberal Arts

Ling 3001 INTRODUCTION TO LINGUISTICS. 5 credits, \$5001, \$255(♦\$127.50).

◆ Systematic survey of phonetics, phonology, morphology, syntax, semantics, and
(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

historical-comparative linguistics; language learning and psychology of language; linguistic universals; language in society. (No prereq. Meets concurrently with 5001)

Ten wk Sec 4 W—6:20-9:35, BlegH 330

Ling 5001 INTRODUCTION TO LINGUISTICS. 5 credits, \$3001, \$255.

See description for Ling 3001. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 3001)

Ten wk Sec 2 W—6:20-9:35, BlegH 330

Ling 5801 INTRODUCTION TO LANGUAGE LEARNING. 4 credits, \$204 (♦\$102).

Overview of first- and second-language learning. **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)

Ten wk Sec 1 T—6:20-8:50, CivMinE 213

Logistics Management (LM)

(395 Humphrey Center: 624-8030)

Carlson School of Management

No courses offered summer 1990.

MBA Program

Students interested in the Master of Business Administration degree offered through the School of Management should contact the MBA Program office in room 295 of the Hubert H. Humphrey Center; telephone 624-0006 for information.

Management

(835 Management/Economics: 624-5232)

Carlson School of Management

Mgmt 3001 FUNDAMENTALS OF MANAGEMENT. 4 credits, \$8001, \$230 plus \$14 special fee. Total \$244. (IS)

Leadership and management functions such as those required to establish goals, policies, procedures, and plans are studied. Motivation, planning, and control systems, and concepts of organizational structure and behavior are also reviewed. (Prereq at least 90 cr completed or in progress. **May not be taken S-N**)

First 5 wk Sec 7 TTh—6-8:45, BlegH 105, Hyoung Moon

Second 5 wk Sec 8 MW—6-8:45, BlegH 105, Charles Flaherty

★**Mgmt 3002 PSYCHOLOGY IN MANAGEMENT.** 4 credits, \$230 plus \$14 special fee. Total \$244.

Centers on development and application of behavior principles, methods, and
(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

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 cr completed or in progress. **May not be taken S-N.** Limited to 36)

First 5 wk Sec 8 MW—6-8:45, HHH Ctr 35, Gordon Rands
Second 5 wk Sec 9 TTh—6-8:45, HHH Ctr 35, Seog Kwun

★Mgmt 3004 **BUSINESS POLICY: STRATEGY FORMULATION AND IMPLEMENTATION.** 5 credits, \$287.50 plus \$14 special fee. Total \$301.50. (IS)

Undergraduate-level capstone course designed to develop skill in the general management functions of identifying and analyzing strategic issues and problems, establishing corporate or divisional goals, and designing realistic programs of action. Case analysis and discussion in class. Students also meet in small groups to prepare cases and occasional presentations to be made to the entire class. Concepts and approaches to strategic planning are taught in this course. These concepts as well as concepts, tools and theories previously presented in other courses are applied to solve goal selection and strategy implementation problems. Usually the viewpoint of the general line manager (department, division, or executive level) is taken. (Prereq sr and completion of business core courses or 1 final core course. **May not be taken S-N.** Limited to 36)

First 5 wk Sec 6 TTh—5:30-9, HHH Ctr 35, W. Bruce Erickson

Marketing

(1235 Management/Economics: 624-5055)

Carlson School of Management

★Mktg 3000 **PRINCIPLES OF MARKETING.** 4 credits, \$230 plus \$14 special fee. Total \$244. (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 cr completed or in progress. **May not be taken S-N.** Limited to 250)

Second 5 wk Sec 7 MW—6-8:30, BlegH 10

★Mktg 3010 **BUYER BEHAVIOR AND MARKETING ANALYSIS.** 4 credits, \$3098, 3095, \$230 plus \$14 special fee. Total \$244.

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, DSci 1050, and at least 90 cr completed or in progress. Limited to 40)

Ten wk Sec 7 T—6-8:30, BlegH 10

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Mathematics

(127 Vincent Hall: 625-8883)

Institute of Technology

Mathematics prerequisites

All mathematics classes have prerequisite courses. For students who have not had the prerequisite courses, several mathematics courses have math placement scores as one of the ways to satisfy the prerequisites. Students will be given this exam on the first night of class. Students who do not pass this exam and have not passed the prerequisite courses will be transferred to the prerequisite class.

Math 1142 is designed in cooperation with the School of Management for benefit of pre-business students. However, it is the second course of a two-course sequence. The first course 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 4 to 6 years. If a student finished calculus 7 or more years ago, then the best thing is to start over with Math 1211. A student may not take Math 5090 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.

Students interested in noncredit introductory mathematics courses should see the General College section of this bulletin.

★ **Math 1005 INTRODUCTION TO ELEMENTARY MATHEMATICS.** 4 credits, \$191.

For pre-elementary education students. Elementary computer programming (BASIC), progressions, financial mathematics, counting problems, other selected topics. (Prereq Math 1111 or equivalent; may not be applied toward any CLA degree. Limited to 35)

Ten wk Sec 2 TTh—6-7:40, KoltH S138

★ **Math 1111 COLLEGE ALGEBRA AND ANALYTIC GEOMETRY.** 5 credits, \$1201, \$238.75. (IS)

Functions and graphs, quadratic equations, progressions, inequalities, complex numbers, theory of equations, permutations and combinations, probability, systems of equations, determinants, graphing of linear and quadratic equations, conics in standard position, logarithms. (Prereq plane geometry, 2 years high school algebra and mathematics placement score or plane geometry and GC 0631. See **Mathematics prerequisites** above. Limited to 35)

Ten wk Sec 19 MW—6-8:05, KoltH S139

Ten wk Sec 20 TTh—6-8:05, KoltH S139

Ten wk Sec 21 TTh—10 a.m.-12:05, MacP

Offered through Continuing Education for Women

★ **Math 1142 SHORT CALCULUS.** 5 credits, \$1211, \$238.75. (IS)

(A second course of a two-quarter sequence for students in pre-business administration curriculum and for other students requiring college algebra and a minimal **(continued next page)**)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

amount of calculus. Students who plan to take several quarters of calculus should not register for this course.) Derivatives, integrals, differential equations, maxima and minima, partial differentiation, applications. (Prereq 1111 or mathematics placement score. See **Mathematics prerequisites** page 75. Limited to 35)

Ten wk Sec 8 **TTh**—6-8:05, KoltH S136

★**Math 1201 PRE-CALCULUS.** 5 credits, \$1008, \$1111, \$238.75. (IS)

Inequalities, analytical geometry, complex numbers, binomial theorem, mathematical induction, functions and graphs, and trigonometric, exponential and logarithmic functions. (Prereq GC 0631 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. See **Mathematics prerequisites** page 75. Limited to 35)

Ten wk Sec 11 **MW**—6-8:05, KoltH S136

★**Math 1211 CALCULUS I.** 5 credits, \$1142, 1311, \$238.75. (IS)

Analytic geometry and calculus of functions of one variable, applications. (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. See **Mathematics prerequisites** page 75. Limited to 35)

Ten wk Sec 15 **MW**—6-8:05, BlegH 130

★**Math 1221 CALCULUS II.** 5 credits, \$1321, 1421, \$238.75. (IS)

A continuation of the course described under 1211. (Prereq grade of C or better in 1211. Limited to 35)

Ten wk Sec 12 **MW**—6-8:05, KoltH S138

★**Math 5090 CALCULUS REFRESHER.** 5 credits, \$310.

A course designed for students who have already had calculus, but who have been away from it for a while and need a review. This course covers the topics of a standard course in calculus of one variable: differentiation of elementary functions, differentials, the definite integral, techniques of integrations, applications of integration, polar coordinates, infinite series, approximation. **May be taken S-N.** (Prereq 1 year calculus. Qualified students may register for graduate credit at the University of Minnesota, except for mathematics majors. Limited to 35)

Ten wk Sec 5 **MW**—6-8:05 KoltH S140

Mechanical Engineering

(125 Mechanical Engineering: 625-0705)

Institute of Technology

ME 1025 ENGINEERING GRAPHICS. 4 credits, \$EG 1025, \$191. (IS)

Engineering representation in pictorial view 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 equivalent)

First 5 wk Sec 3 **TTh**—6-9, Arch 10

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

★ME 5254 **DESIGN MORPHOLOGY WITH APPLICATIONS.** 4 credits, \$248.

Detailed study of design problem formulation and the structure of the open-ended solution process based on design morphology. Case studies and student projects as instructional vehicles. (Prereq completion of sequences 3201-03-05, 3303-5342. Mechanical Engineering Upper Division. **May not be taken for graduate credit.** Limited to 30)

Ten wk Sec 1 W—6-9, CivMinE 213

Music

(100 Ferguson Hall: 624-5740)

College of Liberal Arts

Mus 1001 FUNDAMENTALS OF MUSIC. 4 credits, \$191.

Study of basic musical symbols, vocabulary, rhythm, design, scale structures, intervals, chords. The development of basic piano skills; the playing of simple accompaniments. Recommended for students interested in a basic introduction to music; not for music majors. (No prereq)

First 5 wk Sec 7 MTh—6:15-9:25, FergH 225, David Damschroder

Second 5 wk Sec 8 MTh—6:15-9:25, FergH 225, John Anderson

★Mus 1051 **PIANO CLASS FOR NON-MUSIC MAJORS.** 2 credits, \$95.50.

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. Limited to 32)

Ten wk Sec 7 T—6:15-9:25, FergH 259

★Mus 1160 **VOICE: CLASS LESSONS.** 2 credits, \$95.50.

Fundamentals of healthy voice production in speaking and singing—posture, relaxation, breathing/breath management, tone placement, diction and vocal hygiene. Vocal performance skills learned in the study and performance of simple songs. (Prereq ability to learn and perform simple songs. Limited to 16)

First 5 wk Sec 4 MTh—6:15-7:45, FergH 90, Clifton Ware

Mus 1513 EAR-TRAINING AND SIGHT-SINGING III. 1 degree credit, \$47.75.

Melodic, harmonic, and rhythmic dictation; sight-singing; clef-reading; musicianship drill. (Prereq 1512, ¶1533)

Ten wk Sec 1 MTh—6:15-7, FergH 149

Mus 1533 THEORY III: HARMONY AND VOICE LEADING. 3 credits, \$143.25 (♦\$71.75).

Writing and analysis of diatonic and basic chromatic tonal structures. Binary and ternary form. (Prereq 1532, ¶1513)

Ten wk Sec 1 MTh—7:15-8:50, FergH 149

★Mus 5280 **VOCAL COACHING SEMINAR.** 3 credits, \$153.

Class coaching for Art Song, preparation to include: Historical background of poetry and music, stylistic interpretation, and techniques for presentation. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 12)

First 5 wk Sec 1 MWF—4-6, FergH 225, Ruth Palmer

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Mus 5370 VOCAL PERFORMANCE SEMINAR. 2 credits, \$102.

Vocal performance in a seminar setting. Performance problems—stage deportment, interpretation, vocal technique, diction. (Prereq 18 cr in applied voice, #. Qualified students may register for graduate credit at the University of Minnesota)

First 5 wk Sec 1 **TTh**—4-6, FergH 85, Glenda Maurice

Mus 5378 USE AND CARE OF THE HUMAN VOICE. 1 credit.

Physiology and anatomy of the human voice, psychology, acoustics, general and specific health care, and therapeutic techniques. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota). The course meets on Thursday and Friday, June 14 and 15, from 8 a.m. to 10 p.m., and again on Saturday, June 16, from 8 a.m. to 4 p.m. All sessions meet in Ferguson Recital Hall, taught by Clifton Ware. Call **Debbie Plwoschuk at 625-6358** for registration and tuition information.

Mus 5440 VOCAL ENSEMBLE. 1 credit, \$51.

Performance in small vocal ensembles. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

First 5 wk Sec 1 **TTh**—6-7, FergH 85, Glenda Maurice

★Mus 5950 SPECIAL TOPICS: WORKSHOP: Perspectives of English Choral Music. 1 credit, \$51.

Lectures on English choral music from Renaissance to Contemporary periods by John Rutter of Cambridge, England. Students perform in a required final concert performance of English choral music in St. Paul Cathedral led by Rutter on June 27 (7 p.m. call; 7:30 p.m. concert). *Required rehearsals on June 25 and 26 from 7 to 9:30 p.m. at the Cathedral.* (Prereq written #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Spec Term Sec 4 **MTW**—8-10:15 a.m., June 25, 26, 27, FergH

Recital Hall, John Rutter, and

MTW—1-3:15 p.m., June 25, 26, 27, FergH 90,

John Rutter

No late fee through June 18

Music Education

(100 Ferguson Hall: 624-5740)

College of Education

No MuEd courses offered summer 1990.

Operations and Management Science

(332 Management/Economics: 624-7010)

Carlson School of Management

School of Management degree students must take Operations and Management Science courses A-F.

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

★**OMS 1020 (formerly MSci 1020) DATA ANALYSIS AND STATISTICAL INFERENCE FOR MANAGERS.** 4 credits, §MSci 1020, \$191.

Introduction to probabilistic and statistical techniques for decision making, including data analysis, sampling, estimation, and hypothesis testing and regression. Using computer software and computer-stored data in statistical analysis. Introduction to modeling and linear programming. (Prereq MSci 1010 or IDSc 1010, pre-management student, Math 1111; Math 1131 recommended. Limited to 45)

Ten wk Sec 8 W—5:30-9:30, BlegH 125

★**OMS 3000 (formerly OM 3000) INTRODUCTION TO OPERATIONS MANAGEMENT.** 4 credits, §OM 3000, \$230 plus \$14 special fee. Total \$244.

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 or completed or in progress. **Open to nondegree students with equivalent experience.** Limited to 40)

First 5 wk Sec 8 MW—5:30-8:50, AndH 330, John B. Knauff

Second 5 wk Sec 9 TTh—5:30-8:50, BlegH 110, Lee Wickstrom

Philosophy

(355 Ford Hall: 625-6563)

College of Liberal Arts

Phil 1001 LOGIC. 5 credits, \$238.75 (♦\$119.50). (IS)

◆ Application of formal techniques for evaluating arguments. (No prereq)

First 5 wk Sec 9 MW—6:20-8:50, AndH 350

Second 5 wk Sec 10 TTh—6:20-8:50, AndH 330, C. Wade Savage

Phil 1002 INTRODUCTION TO PHILOSOPHY. 5 credits, \$238.75 (♦\$119.50). (IS)

◆ Problems, principal methods and schools of philosophy; historical and contemporary views. (No prereq)

First 5 wk Sec 5 TTh—6:20-8:50, BlegH 145, Douglas Lewis

Second 5 wk Sec 6 TTh—6:20-8:50, BlegH 260, C. Anthony Anderson

Phil 3302 MORAL PROBLEMS OF CONTEMPORARY SOCIETY. 5 credits, \$255 (♦\$127.50).

◆ Selected problems of current interest. (No prereq)

First 5 wk Sec 2 MW—6:20-8:50, BlegH 250

Physical Education

(224 Cooke Hall: 625-1007)

College of Education

No PE courses offered summer 1990

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134.

Courses and sections in red have limits on enrollment. See page 5.

Plant Biology (PBio)

(220 Biological Sciences: 625-1234)

College of Biological Sciences

★**PBio 1009 MINNESOTA PLANT LIFE.** 4 credits, \$191 plus \$5.50 special fee. Total \$196.50.

Identification of the more characteristic and conspicuous Minnesota plants including many lower forms, with discussion of basic distinctions, life cycles; habitat requirements, distribution, vegetation types, and ecological relations. Four Saturday (8 a.m.-12) field trips will replace four evening sessions. (No prereq. Limited to 45)

Ten wk Sec 1 **MW**—6:10-8:55, BioSci 6, StP Campus

Political Science

(1414 Social Sciences: 624-4144)

College of Liberal Arts

Pol 1001 AMERICAN GOVERNMENT AND POLITICS. 5 credits, \$238.75 (◆\$119.50). (IS)

◆ Principles, organization, processes, functions of government, and the interplay of political forces in the United States. Attention throughout to current issues. (No prereq)

First 5 wk Sec 4 **MW**—6-9:15, AndH 230, James Melcher

Pol 1025 WORLD POLITICS. 4 credits, \$191 (◆\$95.50).

◆ Contemporary international relations; forms of state interaction; problems of conflict and cooperation. (No prereq)

Second 5 wk Sec 3 **MW**—6-8:30, AndH 250, John Freeman

Pol 1041 CONTEMPORARY POLITICAL IDEOLOGIES. 4 credits, \$191 (◆\$95.50).

◆ 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)

Second 5 wk Sec 2 **TTh**—6-8:30, BlegH 105, Edwin Fogelman

Pol 3051 INTRODUCTION TO POLITICAL ANALYSIS. 5 credits, \$1051, \$255 (◆\$127.50).

◆ Formation of political communities, political participation, policy making, compliance, legitimacy, political development, types of political systems. Empirical and normative problems. Comparisons among major countries. (No prereq)

First 5 wk Sec 3 **TTh**—6-9:15, AndH 350, Barbara Cruikshank

Pol 3835 THE INTERNATIONAL SYSTEM. 4 credits, \$204 (◆\$102).

◆ Structure of international system; balance of power, bipolar and other international systems; theories of stability. Change, conflict, and cooperation. (No prereq)

Second 5 wk Sec 1 **TTh**—6-8:30, AndH 230, Raymond Duvall

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134.

Courses and sections in red have limits on enrollment. See page 5.

Portuguese

(See page 86)

Psychology

(N218 Elliott Hall: 625-4042)

College of Liberal Arts

Psy 1001 INTRODUCTION TO PSYCHOLOGY. 5 credits, \$238.75 (♦ \$119.50). (IS)

- ◆ Introduction to study of human behavior. Prerequisite for all advanced courses in psychology. (No prereq)

Ten wk Sec 14 MW—6:20-8:30, AndH 370

Ten wk Sec 15 TTh—6:20-8:30, AndH 370

Psy 1003 APPLICATION OF PSYCHOLOGY TO LIVING. 4 credits, \$191 (♦ \$95.50).

- ◆ 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)

First 5 wk Sec 5 TTh—6-8:30, BlegH 150

★Psy 1004-1005 INTRODUCTORY LABORATORY PSYCHOLOGY. 4 credits each term, \$191 each term.

Experiments illustrating contemporary subject matter such as human and animal learning, problem solving, visual perception, measurement of general and special abilities and personality traits. (Prereq 1001 or 11001 for 1004; 1004 for 1005. Limited to 24)

First 5 wk 1004 Sec 6 TTh—6:20-8:50, EltH 150-160

Second 5 wk 1005 Sec 7 TTh—6:20-8:50, EltH 150-160

Psy 3101 INTRODUCTION TO PERSONALITY. 4 credits, \$5101, \$204 (♦ \$102). (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)

First 5 wk ★Sec 3 MW—9-11:30 a.m., MacP (Limit 40)

Offered through Continuing Education for Women

Ten wk Sec 4 Th—6-8:30, AndH 250

Psy 3201 INTRODUCTION TO SOCIAL PSYCHOLOGY. 4 credits, \$204 (♦ \$102).

- ◆ 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)

Ten wk Sec 3 T—6-8:30, KoltH S132

★Psy 3604 INTRODUCTION TO ABNORMAL PSYCHOLOGY. 4 credits, \$5604, \$204 (♦ \$102). (IS)

- ◆ The field of abnormal psychology. Etiologies of behavior disorders; discussion of available treatments. (Prereq 1001. Limited to 55)

Ten wk Sec 8 M—6-8:30, BlegH 255

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

★**Psy 3801 INTRODUCTION TO MEASUREMENT AND STATISTICAL METHODS.** 4 credits, \$204 (◆\$102).

- ◆ Quantification in research problems in psychology. Descriptive and inferential statistics, hypothesis testing, nonparametric statistics. Examples from various areas of psychology. (Prereq 1001 or equivalent. Limited to 67)

Ten wk Sec 9 **M**—6-8:30, EltH N119
Ten wk Sec 10 **T**—6-8:30, EltH N119

Psy 5141 PSYCHOLOGY OF WOMEN. 4 credits, \$204 (◆\$102).

- ◆ Psychological and physical sex differences: developmental and environmental influences on dependency, aggression, achievement motivation, and achievement. Sex roles and sexuality during various life phases. (Prereq 1001. Qualified students may register for graduate credit at the University of Minnesota)

Second 5 wk Sec 3 **MW**—5:30-8, KoltH S137, Patricia Faunce

★**Psy 5202 ATTITUDES AND SOCIAL BEHAVIOR.** 4 credits, \$204 (◆\$102).

- ◆ 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. Limited to 67)

Ten wk Sec 2 **W**—6-8:30, EltH N119

Public Health

(A302 Mayo: 624-6669)

Eighth Annual Summer Occupational Health and Safety Institute September 10-14, 17-21, 1990

An intensive, interdisciplinary course of study designed for professionals currently or soon-to-be practicing in occupational health and safety. Fifteen individual, graduate-level courses will be offered over the two-week period on the Minneapolis campus. Courses include: Occupational Health Seminar, Industrial Hygiene Engineering, Theory and Practice of Occupational Health Nursing, Topics in Occupational Medicine, Safety in the Work Place, Ventilation Control of Occupational Hazards, Risk Assessment and Risk Management, Environmental and Occupational Toxicology, Principles of Management in Health Services Organizations, Ergonomics in Occupational Health, Hazardous Waste Management, Advanced Engineering Problems, Principles in Occupational Epidemiology. AMA Category I credit toward the Physician's Recognition Award of the American Medical Association; American Board of Industrial Hygiene for maintenance of Certification Points; Nursing contact hours. *Qualified students may register for graduate credit at the University of Minnesota.*

For further information, contact: Jeanne Ayers, Director, Program in Continuing Education, Midwest Center for Occupational Health and Safety, St. Paul-Ramsey Medical Center, 640 Jackson Street, St. Paul, MN 55101; (612) 221-3992.

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Research Explorations

(See page 113)

Rhetoric

(202 Haecker: 624-3445)

College of Agriculture

★Rhet 1104 **LIBRARY RESEARCH METHOD.** 1 credit, \$47.75.

On-site and interactive video instruction in information retrieval techniques designed to strengthen skills in using the library. Students work independently but must satisfactorily complete all exercises and problem-solving assignments to receive credit. Students must attend an initial orientation session of one hour. Computer-assisted instruction. **Microcomputer lab card required. Must be taken S-N.** (No prereq. Limited to 30)

Ten wk Sec 1 W—5-5:45, CentLib 2, StP Campus, Greg Richardson

★Rhet 1151 **WRITING IN YOUR MAJOR.** 4 credits, \$191.

Students investigate and write on subjects related to their majors. The criterion of appropriateness: good writing meets the expectation of readers and the conventions of a particular form. Assignments such as literature review, abstract, fact sheet, instructions, and feature article. (Prereq 1104 [or College of Natural Resources students only: FR 1104 or ForP 1104 or FW 1104], completion of freshman communication requirement, and sophomore status. Limited to 23)

Ten wk Sec 3 Th—6-8:30, HckrH 111, StP Campus, Keith Yeager

★Rhet 1160 **COLLEGE READING.** 4 credits, \$5160, \$191 plus \$3 course fee. Total \$194. (IS)

Factors which make for successful college reading performance; application of psycholinguistic and cognitive theories of reading; opportunities for developing expertise in reading comprehension and retention, rapid reading, vocabulary power, and communication skills. Not a basic course. A suggested follow-up for PO 1001, How to Study. (No prereq. Meets concurrently with 5160. Limited to 30)

Ten wk Sec 4 T—6-8:30, BlegH 425, Michael Bennett

★Rhet 1222 **PUBLIC SPEAKING.** 4 credits, \$191.

Practical course in fundamentals of speechmaking. Emphasis on organizing the speech and projecting it to the audience. (Prereq completion of freshman communication requirement. Limited to 18)

Ten wk Sec 4 T—6-8:30, CentLib 6, StP Campus, Lawrence Smith

Ten wk Sec 5 Th—6-8:30, CentLib 6, StP Campus, Michael Bennett

Rhet 3370 **AMERICAN HUMANITIES.** 4 credits, \$274 (♦\$137).

♦ Examination of the American character and changes it has undergone in the 19th and 20th centuries as exemplified by social, artistic, literary, and architectural records. (No prereq)

Ten wk Sec 1 T—6-8:30, ClaOff B30, StP Campus, John Plomondon

★Rhet 3562 **WRITING IN YOUR PROFESSION.** 4 credits, \$274. (IS)

Projects in professional writing. Relationship between structuring information to
(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134.

Courses and sections in red have limits on enrollment. See page 5.

meet the needs of particular readers and writing effectively. Assignments such as the feasibility report, proposal, memorandum, letter of application, and resumé. (Prereq freshman communication requirement, 1151, jr or sr status. Limited to 23)

Ten wk Sec 4 **M**—6-8:30, KoltH S133, Elin Anderson

Ten wk Sec 5 **W**—6-8:30, ClaOff B30, StP Campus, John Plomondon

★**Rhet 5160 COLLEGE READING.** 4 credits, \$1160, \$274 plus \$3 course fee. Total \$277.

Factors which make for successful college reading performance; application of psycholinguistic and cognitive theories of reading; opportunities for developing expertise in reading comprehension and retention, rapid reading, vocabulary power, and communication skills; completion of seminal reading-theory textbook, seminar meetings, and paper are required. (No prereq. Meets concurrently with 1160. Qualified students may register for graduate credit at the University of Minnesota. Limited to 10)

Ten wk Sec 4 **T**—6-8:30, BlegH 425, Michael Bennett

★**Rhet 5573 GRANT PROPOSAL.** 3 credits, \$205.50.

Writing the grant proposal, including establishing credibility, problem statement, program objectives, plan of action, evaluation, budget presentations, and proposal summary. Designed to serve both real and hypothetical situations. (Prereq STC/Tech Comm major or minor, freshman communication requirement, 3562 or grad status, or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 15)

Ten wk Sec 1 **W**—4-6:30, HckrH 302, StP Campus, Victoria Mikelonis

Russian and East European Studies

(253 Elliott Hall: 625-9870)

College of Liberal Arts

No Russ courses offered summer 1990

Scandinavian

(210 Folwell Hall: 625-9887)

College of Liberal Arts

Scan 3618 SCANDINAVIAN DRAMA, 1870-1940. 4 credits, \$204. (♦\$102)

◆ Plays viewed in context of modern theatre, with emphasis on different critical methods of interpretation. (No prereq)

First 5 wk Sec 1 **TTh**—6:20-8:50, AndH 330, Göran Stockenström

Social Work

(400 Ford Hall: 624-5888)

College of Home Economics

No SW courses offered summer 1990.

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Sociology

(909 Social Sciences: 624-4300)

College of Liberal Arts

Soc 1001 INTRODUCTION TO SOCIOLOGY. 4 credits, \$191 (♦ \$95.50). (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)

First 5 wk Sec 10 TTh—6-8:30, BlegH 130, William Brustein

Second 5 wk Sec 11 TTh—6-8:30, BlegH 215, Rose Brewer

Soc 3101 (formerly CJS 3101) INTRODUCTION TO AMERICAN CRIMINAL JUSTICE. 4 credits, \$204 (♦ \$102). (IS)

Philosophical and policy underpinnings of criminal justice in America. (No prereq)

First 5 wk Sec 2 MW—6-8:30, BlegH 415, David Ward

Soc 3214 UNDERSTANDING EVERYDAY LIFE. 4 credits, \$204 (♦ \$102).

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, jr, or sr)

Second 5 wk Sec 2 TTh—6-8:30, BlegH 415, Robert Fulton

Soc 3315 LATIN AMERICAN SOCIETIES IN TRANSITION. 4 credits, \$204 (♦ \$102).

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 or economics or anthropology or political science or #)

Second 5 wk Sec 2 MW—6-8:30, ClaOff B35, StP Campus,
Dario Menanteau

Soc 3401 PRINCIPLES OF SOCIAL ORGANIZATION. 5 credits, \$255.

How and why social organization is possible. Major concepts and theories of social structure, primary forms of social organization (groups, communities, networks, formal organizations), basic social processes (integration, differentiation, regulation, change), and how social organization evolves from individual decision making. Course content varies. (Prereq 1001, 3801, or equivalent)

First 5 wk Sec 2 MW—Lect, 6-8, RarigC 616, Joel Nelson

MW—Lab, 8:15-9:15, RarigC 616

Soc 5161 CRIMINAL LAW IN AMERICAN SOCIETY. 4 credits, \$204 (♦ \$102).

Purposes and principles of criminal law; proper limits of criminal sanction and suggested reforms in existing criminal law. (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

First 5 wk Sec 2 TTh—6-8:30, MechE 212, Joel Samaha

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Spanish and Portuguese

(34 Folwell Hall: 625-5858)

College of Liberal Arts

Reading Spanish

Span 0221 is specifically designed for individuals who desire only a reading knowledge of the language. The Spanish language requirements for a graduate degree also may be satisfied by successfully passing an examination given at the end of the course. Graduate students should check with their advisers for specific language requirements in their field of study.

Span 0221 READING SPANISH. No credit, \$191. (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)

Second 5 wk Sec 2 MW—6-8:30, BlegH 210, Ruth E. Jones

★Span 1103 BEGINNING SPANISH. 5 credits, \$238.75. (IS)

Basic listening, speaking, reading and writing skills. Stress on the development of communicative competence. Some cultural readings. (Prereq 1102. Limited to 25)

First 5 wk Sec 20 MW—6-8:50, BlegH 260, René Jara

★Span 1104 INTERMEDIATE SPANISH. 5 credits, \$238.75. (IS)

Speaking and comprehension; development of reading and writing skills based on materials from Spain and Spanish America. Grammar review; compositions and oral presentation. (Prereq 1103 or 1205. Limited to 25)

Second 5 wk Sec 4 TTh—6-8:50, BlegH 210

★Span 1105 INTERMEDIATE SPANISH. 5 credits, \$238.75. (IS)

For description, see 1104. (Prereq 1104 or #. Limited to 25)

First 5 wk Sec 3 TTh—6-8:50, BlegH 210, Lawrence Mantini

★Port 3001 PORTUGUESE FOR SPANISH SPEAKERS. 5 credits, \$255.

Study of Portuguese based on student knowledge of Spanish (speakers of other romance languages admissible with permission of the instructor). Contrastive approach to the phonic and morpho-syntactic structures of Portuguese. (Prereq knowledge of Spanish or #. Limited to 20)

First 5 wk Sec 2 MW—6-8:50, BlegH 210, Roberto Reis

★Span 3605 POLITICS IN SPANISH AND LATIN AMERICAN LITERATURE. 4 credits, \$204 (♦\$102).



The civil wars in Spain; national liberation movements and political upheavals in Latin America. Taught in English. (No prereq. **May not be used for Spanish or Portuguese major credit.** Limited to 50)

First 5 wk Sec 2 MW—6-8:30, BlegH 220, Hernan Vidal

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

★Span 3614 **DON QUIJOTE: A STUDY OF LOST ILLUSIONS.** 4 credits, \$204.

An analysis of Cervantes's *Don Quijote* and an examination of its reception from the early 1600s to modern times. A component of the course is *Don Quijote's* reception in Spanish America. Taught in English. (No prereq. **May not be used for Spanish or Portuguese major credit.** Limited to 50)

First 5 wk Sec 2 TTh—6-8:30, BlegH 120, Nicholas Spadaccini

(See also Compleat Scholar 0410, Books You Always Wanted to Read: *Don Quixote* and *Candide*)

**Quincentennial Program
and King Juan Carlos Fellowships for Spanish Teachers**

Summer term (July 3-August 6, 1990); focuses on the study of contemporary Spanish society and culture and integrates language study, culture courses, and the development of curricular materials for classroom use. The courses are specifically designed for U.S. teachers of Spanish. Fellowships are available. Cosponsored by the Ortega y Gasset Foundation, and the Sociedad del Quinto Centenario. (9 semester credits.) Request graduate credit information. **For information:** The Global Campus, 106 Nicholson Hall; telephone 626-7138 or 625-3379.

International Program in Toledo, Spain

Summer term (June 15-July 27, 1990) integrates Spanish language study, liberal arts courses, and field trips with an option of family-stay experience or dormitory living. The program may be used to fulfill language credit requirements at the University of Minnesota. Cosponsored by the Ortega y Gasset Foundation. (9-14 credits.) **For information:** The Global Campus, 106 Nicholson Hall; telephone 626-3379.

Speech-Communication

(317 Folwell Hall: 624-5800)

College of Liberal Arts

★Spch 1101 **FUNDAMENTALS OF SPEECH COMMUNICATION: ORAL COMMUNICATION.** 4 credits, \$191.

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 22)

First 5 wk Sec 6 MW—6-8:30, BuH 125

First 5 wk Sec 7 TTh—6-8:30, KoltH S140

Second 5 wk Sec 8 MW—6-8:30, BuH 125

★Spch 3411 **SMALL GROUP COMMUNICATION PROCESSES.** 4 credits, \$204.

Cooperative thinking in task-oriented groups. Planning, preparing for, and participating in small groups in private and public contexts. *May require group meetings outside regularly scheduled class hours listed below.* (Prereq 1101 or #. Limited to 22)

Second 5 wk Sec 4 TTh—6-8:30, BuH 125

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

★Spch 3451 **INTERCULTURAL COMMUNICATION: THEORY AND PRACTICE.** 4 credits, §UC 3701, \$204.

Theories of and factors influencing intercultural communication. Development of effective intercultural communication skills. (Prereq planning an intercultural experience. Limited to 20)

First 5 wk Sec 3 MW—6-8:30, BuH 123

Statistics

(270a Vincent Hall: 625-8046)

College of Liberal Arts

Stat 3091 **INTRODUCTION TO PROBABILITY AND STATISTICS.** 4 credits, §5121, §5131, \$204.

Elementary probability and probability distributions, sampling and elements of statistical inference. (Prereq differential and integral calculus)

Ten wk Sec 4 T—6:15-8:45, BlegH 135

Study and Travel Adventures

(See page 112)

Study Skills

See Learning and Academic Skills, page 72. See also page 111.

Textiles and Clothing

(240 McNeal Hall: 624-9700)

College of Home Economics

Design, Housing, and Apparel

★TexC 3601 **TAILORING.** 4 credits, \$274.

Principles of structuring tailored garments. Analysis of hand, machine, and fusing methods. (Prereq 1603 or #. Limited to 20)

First 5 wk Sec 1 TTh—6-9, McNH 475, StP Campus

TexC 3604 **FLAT PATTERN DESIGN.** 3 credits, \$205.50.

Principles of flat pattern design; drafting and advance pattern development. (Prereq soph, 1603, 3662 or Dsgn 1525 or Δ)

First 5 wk Sec 1 MW—6-8:30, McNH 212, StP Campus

★TexC 3646 **RETAIL SUPERVISION.** 3 credits, \$205.50.

Techniques of management, motivation, and supervision with specific attention to
(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134.
Courses and sections in red have limits on enrollment. See page 5.

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 #. Limited to 30)

First 5 wk Sec 2 TTh—6:30-8:45, McNH 470, StP Campus, Vern Lovestad

★**TexC 3660 DESIGN PROBLEMS: GRADING AND SIZING ISSUES IN APPAREL DESIGN.** 2 credits, \$137.

Concepts and theory of pattern grading and sizing; laboratory experience in pattern grading from basic sloper; principles involved in sizing. (No prereq. Limited to 20)

First 5 wk Sec 1 TTh—6-8, McNH 205, 212, StP Campus

★**TexC 5623 THE DYEING MEDIUM AND COLOR.** 3 credits, \$205.50.

Principles of dye selection for specific fibers; precision dyeing for exploring perceived color relationships and expanding the utility of this medium. (Prereq 3621, Dsgn 1521, or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 24)

First 5 wk Sec 1 TTh—6-9, McNH B9, StP Campus, L. Butterfield

Vocational Education

(210 Vocational/Technical Building: 624-1221)

College of Education

Vocational and Technical Education

★**VoEd 5760 ORGANIZATION DEVELOPMENT IN INDUSTRY AND BUSINESS.** 3-4 credits; 4 credits this offering, \$257.

Introduction to major concepts, skills, and techniques for organization development in industry and business. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Spec Term Sec 3 MTWThF—9:05 a.m.-12:35, July 19-Aug. 1,
VoTech R285, StP Campus, Susan DeVogel

★**VoEd 5762 MANAGEMENT OF CONFLICT.** 2 credits, \$128.50.

Types, sources, and diagnosis of conflict styles; skills and strategies for managing interpersonal, intergroup, and intragroup conflict. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Spec Term Sec 3 MTWThF—9:05 a.m.-12:35, July 9-13, VoTech R280,
StP Campus, Susan DeVogel
No late fee through July 2

★**VoEd 5770 TRAINING AND DEVELOPMENT: USING TEAM BUILDING IN BUSINESS AND INDUSTRY.** 1-4 credits. 3 credits this offering, \$192.75.

Developments related to problems; practices; programs, methodologies in training and development. *Focus this offering:* Introduction to the theories and techniques of building effective work teams. Skills development in facilitating team building activities. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

First 5 wk Sec 13 TTh—5:30-8, VoTech R285, StP Campus, Susan Damme

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

★VoEd 5770 **TRAINING AND DEVELOPMENT: SKILLS AND TECHNICAL TRAINING PRACTICES.** 1-4 credits. 4 credits this offering, \$257.

Developments related to problems; practices; programs, methodologies in training and development. *Focus this offering:* Analysis of skills and technical training practices in industry and business. Systems and troubleshooting work behavior will be emphasized along with unique analysis techniques and training methods. **Must be taken A-F.** (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Second 5 wk Sec 14 TTh—6-9:30, VoTech R280, StP Campus

Women's Studies

(492 Ford Hall: 624-6006)

College of Liberal Arts

★WoSt 3205 (formerly 3301) **WOMAN: A SENSE OF IDENTITY.** 4 credits, \$5205, \$204.

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. (No prereq. No auditors. Students are expected to attend all class sessions. Meets concurrently with 5205. Limited to a combined total of 40)

cew

Ten wk Sec 8 T-6:20-9:20, CivMinE 212, Dorothy Loeffler
Offered through Continuing Education for Women

★WoSt 3307 **MODERN FEMINIST NOVEL.** 4 credits, \$204 (♦\$102).



Analysis of fiction written by women that addresses questions of women's identity and the diversity of women's experience. (No prereq. Limited to 40)

Second 5 wk Sec 2 MW—6:20-8:50, FordH 55, Susan Noakes

★WoSt 5200 **WOMEN AND COMPETITION.** 4 credits, \$204 (♦\$102).



An active exploration of the emerging view and concept of competition as related to women. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 40)

First 5 wk Sec 2 MW—5:30-8, FordH 55, Patricia Faunce

★WoSt 5205 **WOMAN: A SENSE OF IDENTITY.** 4 credits, \$3205, \$204.

See description for 3205. (No prereq. No auditors. Students are expected to attend all class sessions. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with WoSt 3205. Limited to a combined total of 40)

cew

Ten wk Sec 8 T—6:20-9:20, CivMinE 212, Dorothy Loeffler
Offered through Continuing Education for Women

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Youth Development and Research (YoSt)

(386 McNeal Hall: 624-3700)

**College of Home Economics
(School of Social Work)**

EXPERIENTIAL LEARNING (YoSt 5132, 3 credits)

Course covers (1) rationale for and purposes of experiential learning in schools and youth-serving agencies, (2) development and implementation of programs in which adolescents serve their communities, and (3) evaluation of experiential-learning programs. Each student develops a plan for experiential program for teenagers. *Residency required at Wilder Forest (Stillwater, Minn.) for the course. Meets Sunday through Friday, June 24 (4:30 p.m.) through June 29 (4 p.m.).* Instructors are Daniel E. Conrad and James Kielsmeier.

To register, and for further information about fees, prerequisites, and the availability of graduate credit, contact National Youth Leadership, 1910 W. County Road B, Roseville, MN 55113. Or telephone (612) 631-3672.

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Noncredit Courses

Credit courses are listed beginning on page 32.

I. The Compleat Scholar (CSch) and Practical Scholar (PSch)

Telephone 624-8880 for information.

The Compleat Scholar and Practical Scholar programs make up a comprehensive curriculum of courses offering University learning without credit. The programs are a combination of introductory-level and advanced courses which introduce topics and disciplines not studied before, and help them investigate in greater depth areas with which they are already familiar.

The Compleat Scholar (CSch) program is a noncredit liberal arts program based on the University curriculum. Its purpose is to give adults an opportunity to continue the pursuit of knowledge beyond their formal education. It is organized into five subject areas: *The Arts; Mind, Self, and Society; Literature; Natural and Physical Sciences; and Writing*. The term "The Compleat Scholar" is borrowed from Isaak Walton, the 17th-century gentleman author of "The Compleat Angler." Here the word is used to mean the educated person of eclectic taste, not an authority, but having a curiosity of mind.

The Practical Scholar (PSch) program uses University resources and expertise to help participants solve problems and learn skills in their personal, academic, and work life. The four subject areas are: *Business and Professional Development; Human Development; Interests and Insights; and University Access*.

CSch and PSch courses are scheduled for one to eleven meetings and offer stimulating and challenging learning in lecture and discussion formats which do not include grades or exams. Anyone may register for a course. There are no admission or entrance requirements; students need only a desire to learn. Registration in specific classes, however, may require prerequisite courses.

See page 94 for CSch offerings and page 103 for PSch offerings.

Continuing Education for Women

Telephone 624-5267 for information.

The University of Minnesota has a long history of involvement in women's education. Continuing Education for Women continues this tradition by offering quality, innovative, and timely programs using University resources. As part of the Compleat Scholar and Practical Scholar curriculum, CEW offers women noncredit courses to meet their needs and interests in an ever-changing society. Noncredit CSch and PSch classes designed around women's needs and interests are identified by a CEW symbol in the left margin next to the course description or section. *Courses begin on page 94.*

Continuing Education for Women also offers credit classes in times, formats, and locations designed to accommodate student needs. Most credit classes meet once a week during the day at off-campus locations. Many credit classes may be taken for no credit. They are indicated in the credit courses section of this Bulletin by a diamond symbol (◆) and price next to the tuition cost. **For information on Continuing Education for Women credit and non-**

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

noncredit courses

credit classes, call CEW at 624-5267. The following credit courses are being offered through CEW this summer:

Math 1111

Psy 3101

WoSt 3205/5205

College Algebra and Analytic Geometry

Introduction to Personality

Woman: A Sense of Identity

See page 94 for CSch offerings and page 103 for PSch offerings.

II. Study and Travel Adventures (STA)

Telephone 624-3300 for information.

Led by University instructors, these study tours are for people who like to travel, have an interest in a particular place or topic, would like a tour with a difference, or want to explore a topic in a retreat setting. They are designed to provide college learning with the special benefits of on-site exploration and first-hand experience. Of particular advantage are the flexibility in scheduling, opportunities for group interaction, and reasonable cost. Instructors are selected for their expertise in a topic and knowledge of locations. Most have traveled widely and have considerable teaching experience, although usually they are not professional tour guides.

See page 112 for Study and Travel offerings.

III. University Research Explorations (REX)

Telephone 626-0214 for information.

The Research Explorations program facilitates the participation of volunteers from the general public in field research with University of Minnesota faculty to support important research projects and share in a spirit of discovery.

See page 113 for complete REX information.

THE
COMPLEAT
SCHOLAR



THE
PRACTICAL
SCHOLAR

The Compleat Scholar and Practical Scholar Registration

Unless otherwise noted, 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. Late registrations for noncredit classes must be accompanied by a late fee. See page 9. Late

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

noncredit courses

registration dates are listed with course descriptions for each noncredit class that does not begin the first week of the term.

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 32.

Books for The Compleat Scholar and Practical Scholar Courses

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 26.

Tuition for The Compleat Scholar and Practical Scholar Courses

See course and project descriptions below for tuition charges or contributions for each course.

University employees who wish to take noncredit classes must pay one-half the regular tuition plus fees (if any). Eligible employees are those working at least 75 percent time in an ongoing or temporary appointment; working 100 percent time during the period for which the course is held if on a 9-month or 11-month appointment; and those on maternity or other leaves without pay. Employees on student appointments, family members of University employees, and laid-off employees are not eligible for this reduced tuition plan. When registering, employees must submit a letter from the head of their department verifying employment. 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 receive a \$10 discount on all noncredit classes that have a minimum tuition of \$30 (see individual course descriptions for tuition). Participants pay course fees and special fees, if any.

Refunds

The Compleat Scholar/Practical Scholar refund policy follows the Extension Classes policy described on page 29 of this bulletin, except for 1- or 2-day classes or seminars. Refund requests for one- or two-day classes or seminars must be received in writing or in person at The Compleat Scholar/Practical Scholar office (200 Westbrook Hall) three (3) working days in advance of the class. Registrants who fail to attend or to cancel properly are liable for the entire fee.

Compleat Scholar Summer Course Offerings The Arts

★CSch 0122 **PAINTING IN WATERCOLOR.** No credit, \$57 (age 62, \$47).

The soft pastels of watercolor blend and flow to create a dreamlike image. Learn how textural effects, washes, and color combinations create moods in painting. Learn about the tools you will need—paints, papers, brushes—through lectures,
(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

noncredit courses

slides, and demonstrations of watercolor techniques. Practice skills in painting sessions. Each painter receives individual attention to encourage creativity, and group critiques help to refine your skill. (Limited to 25)

Spec Term Sec 2 T—10:30 a.m.-12:30, June 19-July 17 (5 meetings),
Highland Park Library, 1974 Ford Parkway,
St.P, Netz
No late fee through June 12

(Marija Skutans Netz is an award-winning watercolorist whose paintings appear in local galleries as well as in private and corporate collections. She has taught at the University of Minnesota and is a popular watercolor workshop leader and guest speaker)

★CSch 0130 USING DRAWING IN EVERYDAY LIFE. No credit, \$57 (age 62, \$47).

Artists aren't different people—rather, each person is a different artist. Simple drawing skills will help you to develop your artistic ability and awareness. Explore basic shapes to build an appreciation for the natural art all around you, such as the exquisite shape of an eggbeater, or the unique effect of sunlight on the desert and the mountains. Learn to use the visual expression as a communication tool in everyday life. For example, a sketch can clarify a complex proposal in a business meeting. Learn to "picture" concepts so that you can better understand and retain information. This course is for the beginner. Simple drawing materials, such as pencil, felt tip pen, and newsprint paper are required purchases. (Limited to 20)

Spec Term Sec 1 W—6-8, June 27-Aug. 1 (5 meetings—no class July 4),
McNH 316, StP Campus, Kirkeby
No late fee through June 20

(Kris Kirkeby is a scientific illustrator, graphic designer, and photographer for the College of Biological Sciences at the University of Minnesota)

★CSch 0134 PHOTOGRAPHY WORKSHOP. No credit, \$27 (no discount for persons 62 and older).

A one-day workshop in landscape and nature photography in the beautiful Minnesota River Valley. The course includes a five-mile hike to native prairies, oak savannas, wildlife-rich swamps and creeks, and two 1860s stone-built homesteads. Course features discussions and demonstrations of metering, filters, lighting, and methods of working with 35mm and medium and large format nature photography in black and white and color. Ample time devoted to individual interests and concerns. Workshop includes a preliminary session for orientation, equipment and film review, and to arrange carpooling. Open to all levels of photographers working in any format or medium. (Limited to 16)

Spec Term Sec 1 M—6:30-8:30, June 11 (1 meeting plus a field trip,
Saturday, June 16, at 8 a.m.), NCCE 229, Husom
No late fee through June 4

(David Husom, lecturer in photography for the Department of Studio Arts, has had his work featured in over 50 exhibits throughout the United States)

★CSch 0136 THE LANGUAGE OF FILM—FILM NOIR. No credit, \$70 (age 62, \$60).

This course will feature films from the Film Noir (Shadow Film) genre. We will discuss the political, historical, and artistic significance of grouping certain modes of filmmaking within this category, and also examine the relations between various Film Noir works. There will be a particular focus on gender representation in the film samplings, and we will assess its importance in distinguishing differences between Noir mystery, melodrama, and biography. Well known films in this genre are: *The*
(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

noncredit courses

Maltese Falcon, Smash-up: The Story of a Woman, and Strangers on a Train. (Limited to 25)

Spec Term Sec 1 **T**—6-9, July 10-31, (4 meetings), EBCEC 156, StP Campus, Lekas
No late fee through July 3

(Michelle Lekas is a doctoral student in Comparative Studies in Discourse and Society at the University of Minnesota. She has done extensive research on cinema history)

★CSch 0137 PHOTOGRAPHY THEN AND NOW: VISIONS OF THE REAL. No credit, \$65 (age 62, \$55).

The old adage seeing is believing takes on a new meaning in the era of mass communication. In what has been termed the "society of the spectacle," our vision of reality is shaped by an unceasing flow of images. Explore a range of topics raised by the rich variety of images assembled in the Walker Art Center's "Photography of Invention" exhibit. Weekly introductory lectures place avant-garde photography in dialogue with recent social and cultural developments, analyze the visual codes that lend conventional photographs a seemingly natural authority and authenticity, and examine photography's problematic dual status as expressive art form and documentary device. Participants view and discuss the images in the exhibit along with selections from the works of significant 19th- and 20th-century photographers. Suggested readings are drawn from the writings of Walter Benjamin, Susan Sontag, and John Tagg. (Offered in cooperation with the Walker Art Center. Limited to 50)

Spec Term Sec 1 **W**—10 a.m.-12, June 13-July 18 (5 meetings—no class July 4), Walker Art Center, Vineland Pl, Mpls, Bassewitz
No late fee through June 6

(Jon Bassewitz is an advanced graduate student in Comparative Studies in Discourse and Society. He teaches the history of modern political culture in the Department of Humanities at the University of Minnesota)

★CSch 0175 THE URBAN LANDSCAPE AND AMERICAN POLITICS: CONJUNCTIONS. No credit, \$68 (age 62, \$58).

The urban landscape around us is the embodiment of three manifestos—those of Thomas Jefferson, Henry David Thoreau, and Filippo Marinetti. Thomas Jefferson gave us the grid, Henry David Thoreau influenced our parks, and Filippo Marinetti influenced our new downtowns. Each of these men believed that the way the city was shaped would determine the moral fiber of its inhabitants. In this course the words of these and other articulators are read. Subsequently, the spaces in our urban landscape that were produced in response are viewed and discussed. Students will never see the city the same way again. Course is augmented by field trips on Tuesday, **June 19**, and Tuesday, **July 10**. (Limited to 30)

Spec Term Sec 1 **T**—1-3, June 12-July 10 (3 meetings plus 2 field trips), MacP, Condon
No late fee through June 5

(Patrick Condon is an associate professor in the School of Architecture and Landscape Architecture at the University of Minnesota. He has been published widely on the theory and politics of urban landscape design and formerly worked as a city planner)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Mind, Self, Society**CSch 0222 A DAY OF INFAMY.** No credit, \$25 (no discount for persons 62 and older).

Many of the mysteries surrounding the Japanese attack on Pearl Harbor remain unsolved. Why were the American aircraft carriers out of port? Why was the delivery of the warning message from the broken Japanese code delayed? Did Roosevelt play a sinister role in the unfolding of events in late 1941? Take off your snow hats, put on your sleuth caps, and take a peek behind the myths and realities of the tragic events which led America reluctantly into the abyss of World War II.

Spec Term Sec 1 T—6-8, June 19, 26 (2 meetings),
BlegH 230, Bachrach
No late fee through June 12

(Deborah Y. Bachrach is a post-doctoral associate in history at the University of Minnesota. She is particularly interested in the impact of intelligence on the outcomes of great military events)

CSch 0226 HOW WE GREW: WOMEN'S STORIES IN 20TH-CENTURY AMERICA. No credit, \$48 (age 62, \$38).

This course is an exploration of the experience of growing up female in America during the 20th century. As a vehicle for exploration you will read 20th-century women's stories about growing up in America. What are female-specific experiences? Which, if any, female experiences have been common to all 20th-century women? How are female experiences shaped by specific settings; e.g., race, class, region, etc.? In addition, examine the gender "training" all individuals receive while growing up. How did times at play shape ideas about what it means to be female/male? What were family "rules" about being female/male? The main focus will be understanding how gender has affected the experience of growing up in 20th-century America. Includes readings and journal exercises.

Spec Term Sec 1 M—7-9, June 11-July 2 (4 meetings), BlegH 225
No late fee through June 4

(Joy W. Barbre is a doctoral student in American studies at the University of Minnesota and is one of the editors of Interpreting Women's Lives: Feminist Theory and Personal Narrative)

★CSch 0246 GLOBAL MANAGEMENT OF THE ENVIRONMENT AND THE RISE OF LOCAL RIGHTS: INTERSECTION OF TWO REVOLUTIONS. No credit, \$52 (age 62, \$42).

To make sense of the 80s and forecast the 90s, students examine the two great revolutions in the world. One is the movement to manage environment and economy ever more interdependently, comprehensively, and on an ever-larger scale, and is symbolized in the images of global warming, the greenhouse effect, and the death of forests; the other is the movement to advance human rights, local control, ethnicity, individualism, independence, and liberty. This rights movement has recently been most active in Eastern Europe, and earlier in liberation movements in the Third World and in civil rights activism in the U.S. How are these two revolutions related? Are they coincidental, in conflict, or in harmony? The slogans "Think Globally But Act Locally" and "Sustainable Development" recognize that interdependence and independence are connected and promise that they are connected harmoniously. But can this be so? Or are these slogans metaphorical ways of identifying the fundamental tensions in society? As we try to institutionalize both independence and interdependence, are we evolving a new global system? Includes lecture and discussion, and uses case study examples from around the world. (Limited to 30)

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Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

noncredit courses

Spec Term Sec 1 **W**—6-8:30, June 6-20 (3 meetings),
NCCE 229, Gerlach
No late fee through May 30

(Luther Gerlach, professor of anthropology and adjunct professor of public affairs at the University of Minnesota, has written books and produced film and television programs on social movements and cultural change in the U.S., Africa, Asia, and Europe. His recent research interests include processes of global change)

Literature

★CSch 0400 **THE BEST OF HEMINGWAY'S SHORT STORIES.** No credit, \$70 (age 62, \$60).

While there is some critical dispute about Hemingway's stature as a novelist, his rank as one of the premier short story writers of all time is unchallenged. Students read and discuss about fifteen or so of the most important stories as well as ten less impressive efforts, so that some sense of the contour of Hemingway's achievement in the short story genre may be gained. Bring the single course text, *The Short Stories of Ernest Hemingway*, to the first class. (Limited to 35)

Spec Term Sec 1 **T**—10 a.m.-12, June 12-July 17 (6 meetings),
MacP, Solotaroff
No late fee through June 5

(Robert Solotaroff is an associate professor in the Department of English where he has been since 1969. He has recently published an article on Hemingway's A Farewell to Arms and a book on the short stories of Bernard Malamud)

★CSch 0401 **GOTHIC TALES OF MURDER, MYSTERY, AND ROMANCE.** No credit, \$66 (age 62, \$56).

Gothic fiction is a genre about fear—fear of violence, sexuality, insanity, and memory. Struggling to uncover dangerous family secrets or to penetrate the mysteries of nature, Gothic protagonists are tormented by paranoia, anger, and passion. Gothic storytellers, writing against the conventions of "realism," represent mythic conflicts between good and evil and explore the meanings of power, particularly the politics of sex, class, and race. Includes two novels (Daphne du Maurier's *Rebecca* and Bessie Head's *A Question of Power*), one novella (Henry James's *The Turn of the Screw*), and short stories by Nathaniel Hawthorne, Edgar Allan Poe, and Charlotte Perkins Gilman. (Limited to 35)

Spec Term Sec 1 **M**—6-8, June 11-July 16 (6 meetings),
BlegH 235, Winter
No late fee through June 4

(Kari Winter is a doctoral candidate in English literature at the University of Minnesota where she has taught literature and composition. She is currently doing research on women's Gothic novels from the 18th century to the present)

★CSch 0410 **BOOKS YOU ALWAYS WANTED TO READ: DON QUIXOTE AND CANDIDE.** No credit, \$55 (age 62, \$45).

"Tilting at windmills" and "the best of all possible worlds" are expressions that have their origins in these two books. The class reads and analyzes these two great comic classics, both of which in their different ways are not only milestones in literature, but have become modern myths. (Offered in cooperation with the Woman's Club of Minneapolis. Limited to 50)

Spec Term Sec 1 **F**—9:30-11:30 a.m., June 29-July 27 (5 meetings),
(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

noncredit courses

Woman's Club of Mpls, 410 Oak Grove, Kheim
No late fee through June 22

(Johanna Kheim has taught French and humanities at the University of Minnesota. Her doctoral studies at the University were in comparative literature with a focus on the 19th- and early 20th-century novel)

★**CSch 0415 WALDEN IN THE WOODS: THE COMPLEAT THOREAU.** No credit, \$78 (age 62, \$68). Lunch may be purchased in the Tea Room or you may bring a lunch to eat on the Arboretum grounds.

An unconventionally organized course devoted to the work of an unconventional writer. This introduction to Henry David Thoreau takes place at the Minnesota Landscape Arboretum located in Chanhassen, 905 acres of rolling hills, native woods and prairies, and formal display gardens accessible by hiking trails and paved paths. The class consists of two day-long sessions in the woodland setting separated by a three-week interval during which students have an opportunity to read, reflect, and write, pursuing lines of exploration suggested at the first class meeting. The sessions at the Arboretum consist of formal lectures, readings from Thoreau's writings, slide shows, discussions punctuated by authentic 19th-century music, and strolls in the surrounding gardens. (Limited to 20)

Spec Term Sec 1 **Sa**—9-4, June 30, July 21 (2 meetings),
Minnesota Landscape Arboretum Learning Center,
Room 1, 3675 Arboretum Drive, Chanhassen, Glick,
Dolan
No late fee through June 22

(Wendall Glick, professor emeritus of English at the University of Minnesota, Duluth, and John Dolan, associate professor of philosophy at the University of Minnesota, are Thoreau scholars and coeditors of the Thoreau Quarterly)

Natural and Physical Sciences

★**CSch 0506 SUMMER WILDFLOWERS, FERNS, AND SHRUBS OF MINNESOTA.** No credit, \$58 (age 62, \$48). \$52 for Bell Museum members.

Minnesota's forests, prairies, savannas, and wetlands bloom throughout the summer with many little known treasures. Learn to identify the unique and colorful wildflowers, ferns, and shrubs found in these varied habitats of central Minnesota. Evening sessions incorporate lectures and slides with in-depth use of field guides to acquaint participants with the plants seen on the field trips. Three Saturday half-day field trips: **June 16, July 14 and 21**; locations of field trips dependent on where plants are in bloom. (Class tuition does not include any field trip costs of transportation; carpooling is encouraged on field trips.) (Offered in cooperation with the Bell Museum of Natural History. Limited to 25)

BELL
MUSEUM
COURSE



Spec Term Sec 1 **T**—6:30-8:30, June 12, 19, 26, July 10, 17 (5 meetings plus 3 field trips), BellMus 311 (use Auditorium entrance facing Church Street). On July 10 only, the class will meet in ClaOff B36, StP Campus, Burrell
No late fee through June 5

(C. Colston Burrell, former curator at the University of Minnesota Arboretum, is a landscape consultant, writer, and photographer. He has an M.S. in horticulture and is currently a graduate student in the Department of Landscape Architecture. He has a lifelong interest in the growing and propagation of native plants)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

noncredit courses

★CSch 0508 **MARSH, SWAMP, BOG, AND FEN—MINNESOTA'S WETLANDS.** No credit, \$98 (age 62, \$88). \$88 for Bell Museum members.

Minnesota's wetlands are rarely visited except by scientists and naturalists. 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. One Saturday field trip: **Aug. 18** to Wood Lake Nature Center and the Minnesota River Valley. One weekend field trip: **Aug. 25-26** to the Cloquet area (camp at Jay Cooke State Park or stay at a local motel). (Class tuition does not include any field trip costs of transportation or lodging; carpooling is encouraged on field trips.) (Offered in cooperation with the Bell Museum of Natural History. Limited to 25)

Spec Term Sec 1 T—7-9, Aug. 7-21 (3 meetings plus 2 field trips), Bell Mus 3 (use Auditorium entrance facing Church Street), Sigford, Johnson

No late fee through July 31

(Ann Sigford is the manager of the Wood Lake Nature Center. David Johnson is a natural history photographer. Both have extensive experience in wetland ecology)

★CSch 0518 **NATURAL HISTORY OF THE PRAIRIE.** No credit, \$60 (age 62, \$50). \$54 for Bell Museum members.

Combines lectures and field trips to give an overview of the prairie. Lectures include the prairie as an ecosystem and the influence of the prairie on American history and culture. Field trips are natural history oriented and include identification of grasses, flowers, birds and other organisms, and their roles in grassland ecology. Other topics include fire ecology and prairie management. Three half-day field trips: **July 14** to Schaefer Prairie, Glencoe; **July 15** to Allison Savannah, Bethel; **July 21** to Red Wing. (Class tuition does not include any field trip costs of transportation; carpooling is encouraged on field trips.) (Offered in cooperation with the Bell Museum of Natural History. Limited to 25)

Spec Term Sec 1 T—7-9, July 3-17 (3 meetings plus 3 field trips), July 3, 24, and 31, BellMus 175 (use rear entrance across from Folwell Hall), July 10 and 17, Woodlake Nature Center, Sigford, Johnson

No late fee through June 26

(Ann Sigford is the manager of the Wood Lake Nature Center. David Johnson is a natural history photographer. Both have extensive experience in prairie ecology)

★CSch 0519 **ADVANCED PRAIRIE FIELD TRIP: SUMMER ON THE COTEAU DES PRAIRIE, SOUTH DAKOTA.** No credit, \$62 (age 62, \$52). \$56 for Bell Museum members.

This weekend field trip class takes a close look at the hill prairies of the Coteau des Prairie, the birds of the pothole lake region, and the open landscape of South Dakota's Ordway Prairie near Aberdeen (about 700 miles round trip). Focus is on plant and bird identification. Intended for those who have a basic knowledge and experience with prairie flora and fauna. (Class tuition does not include any field trip costs of transportation or lodging; carpooling is encouraged on field trips.) (Offered in cooperation with the Bell Museum of Natural History. Limited to 30)

Spec Term Sec 1 Th—6:30-9, June 21 (1 meeting plus a field trip, June 30-July 1), BellMus 3 (use Auditorium entrance facing Church Street), Sigford, Johnson

No late fee through June 14

(Ann Sigford is the manager of the Wood Lake Nature Center. David Johnson is a natural history photographer. Both have extensive experience in prairie ecology)

BELL
MUSEUM
COURSE



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Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

★CSch 0520 ADVANCED PRAIRIE FIELD TRIP: AUTUMN ON THE PRAIRIES OF THE RED RIVER VALLEY. No credit, \$85 (age 62, \$75). \$78 for Bell Museum members.

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MUSEUM
COURSE



The ancient lake bed and beaches of Lake Agassiz, once home to lush prairies, are now some of the richest crop lands in the world. This field trip class takes a close look at some of the remaining prairies and discusses their significance. The three-day trip takes us into Manitoba for a look at the start of fall migration at a unique prairie bird preserve (about 1,000 miles round trip). Focus is on plant and bird identification. Intended for those who have a basic knowledge and experience with prairie flora and fauna. (Class tuition does not include any field trip costs of transportation or lodging; carpooling is encouraged on field trips.) (Offered in cooperation with the Bell Museum of Natural History. Limited to 30)

Spec Term Sec 1 **Th**—6:30-9, Aug. 23 (1 meeting plus a field trip, Sept. 1-3, Labor Day Weekend), BellMus 3 (use Auditorium entrance facing Church Street), Sigford, Johnson
No late fee through Aug. 16

(Ann Sigford is the manager of the Wood Lake Nature Center. David Johnson is a natural history photographer. Both have extensive experience in prairie ecology)

★CSch 0535 THE EXOTIC WORLD OF THE JAPANESE GARDEN. No credit, \$20 (no discount for persons 62 and older). \$18 for Arboretum members.

Japanese gardens tend to have an intriguing and mysterious air about them because of their complex nature. Learn about the strong influence of history and philosophy in the development of Japanese gardens, the different types of Japanese gardens, plus the natural and man-made materials used in Japanese gardens. Further understanding of Japanese gardens will be augmented by visits to several Japanese gardens in the Twin Cities and slide lectures in the classroom. (Limited to 25)

Spec Term Sec 1 **Th**—6-9, June 14, 21 (2 meetings),
Minnesota Landscape Arboretum Learning Center,
3675 Arboretum Drive, Chanhassen, Kooyman
No late fee through June 7

(Shirley Mah Kooyman, Director of Volunteers at the Minnesota Landscape Arboretum, is a botanist and master gardener. She has several years' experience teaching gardening with wildflowers, woody plant materials, and general botany)

★CSch 0551 THE SCIENCE OF CHAOS: A NEW WINDOW ON BOTH THE ORDINARY AND THE FANTASTIC. No credit, \$52 (age 62, \$42).

During the past 30 years, an entirely new mathematical discipline has arisen that is radically changing the way we view the world. Scientists are taking a fresh look at familiar events, from the beating of the human heart to the ever-changing weather, and are finding delightful patterns, intricate structures, and complex rhythmic cycles. A new vocabulary is being invented: fractals, self-similarity, strange attractors, chaos. With a little guidance, many of the basic concepts and most of the real-world examples of mathematical chaos are readily accessible to the nonspecialist. This course is for those who want to see the beauty of the world with different eyes, as well as for those who just want to get in on some of the fun. We work with the recent book *Turbulent Mirror* by John Briggs and David Peat, a highly readable attempt to bring the mathematics down to earth (begin reading before first class). Ideas or questions based on the best-selling historical account, *Chaos* by James
(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

noncredit courses

Gleick, are also welcome. Household objects and computer demonstrations are used to help everyone discover patterns of chaos for themselves. (Limited to 30)

Spec Term Sec 1 **M**—6:15-8:15, June 11-July 2 (4 meetings), MurH 311

No late fee through June 4

(Larry Gray is a professor in the School of Mathematics. His research concerns mathematical models of systems that contain a large number of randomly interacting components, ranging from ecological models to systems of subatomic particles)

★**CSch 0562 ANCIENT STORIES: FOSSILS OF SOUTHEASTERN MINNESOTA.** No credit, \$52 (age 62, \$42).

The remains of plants and animals preserved in rock layers tell a story about the evolution of life. What organisms lived in the seas of prehistoric Minnesota? Observe fossils from ancient seabeds in the exposed sedimentary rock in southeastern Minnesota. Includes an overview of the fossil record, modes of fossilization, principles of evolution and stratigraphy. Lectures plus an all-day Saturday field trip to southeastern Minnesota for fossil collecting (**June 23**). (Participants provide own transportation; carpooling is encouraged.) (Limited to 20)

Spec Term Sec 1 **M**—6:30-8:30, June 18, 25 (2 meetings plus 1 field trip), PillsH 121, Sloan

No late fee through June 11

(Robert E. Sloan is a professor in the Department of Geology and Geophysics at the University of Minnesota. A member of the department for 36 years, his research interests include the rocks and fossils of southeastern Minnesota and the extinction of dinosaurs in Montana and China)

Writing

★**CSch 0600 CREATIVE WRITING I.** No credit, \$65 (age 62, \$55).

Designed to focus on problems and techniques involved in producing fictional (short stories and novels) and nonfictional (memoir) narratives. Problems include writer's block, the difficulty of starting from scratch (followed by the difficulty of finishing what you've started), and deciding what to put into the story and what to leave out. Presentations on techniques for producing narratives, including a look at the features of the stories people tell for what they reveal about the way experienced writers shape the stories they write. Discussion includes what narrators are and what their descriptions of setting reveal to the reader about plot and character. Participants are welcome to bring in work for reading and discussion, and to talk about problems that arise in the writing process. (Limited to 20)

Spec Term Sec 3 **Th**—9:30-11:30 a.m., June 14-July 19 (6 meetings), MacP, Moses

No late fee through June 7

(Joseph Moses is an instructor in the Composition and Communication Program at the University of Minnesota, and is currently in the Ph.D. program in English language and literature, where he has begun work on a handbook for use in fiction writing workshops. His poetry and fiction have appeared in the Emerson Review and Streamlines)

★**CSch 0606 REFRESHING WRITING.** No credit, \$65 (age 62, \$55).

For persons who write in their careers and would benefit from a brush up on their writing skills. This course is for people who have not taken a writing course in some

(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

time, and may want the chance to work on their own projects while reviewing the following topics: overcoming writer's block, organizing for unity and coherence, and creating focus out of raw material. Individual projects might range from analytical business reports or academic papers to a short story or autobiography. Participants have the chance to review their own writing process to see if modifying it might not make it more enjoyable, more efficient, more orderly (or less orderly!). For writers of fiction as well as nonfiction. (Limited to 20)

Spec Term Sec 1 **W**—6-8, June 13-July 25 (6 meetings—no class July 4), Washburn Library, 5244 Lyndale Ave S, Mpls, Moses
No late fee through June 6

(Joseph Moses is an instructor in the Composition and Communication Program at the University of Minnesota. He has taught courses in basic writing, freshman composition, advanced expository writing, and preprofessional writing for business. He is currently developing seminars designed to reduce stress related to writing in the workplace)

★CSch 0639 MAGAZINE WRITING. No credit, \$85 (age 62, \$75).

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; information search strategies; interviewing skills; writing techniques; how to query an editor; writing ethics and etiquette; and manuscript submission. Class format consists of lecture, discussion, and critiques of students' work. (Limited to 30)

Spec Term Sec 2 **Th**—6:30-8:30, June 21-Aug. 9 (8 meetings), ClaOff B30, StP Campus, Saetre
No late fee through June 14

(Sara Saetre is an M.A. student in journalism and mass communication at the University with an emphasis in magazine writing. She has published feature articles in Mpls./St. Paul magazine, Minnesota magazine, Wisconsin Trails magazine, and other regional publications)

★CSch 0642 NONFICTION WRITING FOR PUBLICATION. No credit, \$66 (age 62, \$56).

Students develop their writing skills and learn procedures for selling their work in 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 atmosphere. (Limited to 15)

Spec Term Sec 1 **W**—6-8, June 13-July 25 (6 meetings—no class July 4), Walker Library, 2880 Hennepin Ave, Mpls, Vick
No late fee through June 6

(Judith Vick has a master's degree in journalism from the University of Minnesota, and is a former English teacher. She is the published author of newspaper and magazine articles and two recent books, and is a market consultant)

Practical Scholar Summer Course Offerings Business and Professional Development

★PSch 0702 CAREER DECISIONS: STRATEGIES FOR CHANGE. No credit, \$78 plus \$9 special fee. Total \$87 (age 62, \$68 plus \$9 special fee. Total \$77).
 (continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

noncredit courses

Take the first step toward assessing your career, your goals, and yourself in relation to your career. Consider values, job satisfaction, job stress, and person-environment fit as key elements of the decision to stay where you are or to make a change. Explore educational training opportunities by learning ways to explore career alternatives. You will also have the opportunity to take the Strong Interest Inventory and the Myers-Briggs Type Indicator, two vocational assessment inventories. (Limited to 30)

Spec Term Sec 3 **W**—6-8, June 27-Aug. 8
(6 meetings-no class July 4),
Walker Library, 2880 Hennepin Ave., Mpls.; Krantz
No late fee through June 20

Spec Term Sec 4 **Th**—6-8, June 28-Aug. 2 (6 meetings),
Washburn Library, 5244 Lyndale Ave S, Mpls, Huck
No late fee through June 21

(Barbara Krantz is a licensed psychologist and career counselor for the Extension Counseling Department. She specializes in career, personal, and academic counseling with current and prospective students. Christina Huck is a doctoral student in the Counseling and Student Personnel Psychology Program at the University of Minnesota. Her master's paper focused on career development, and her specialist certificate on counseling and career development. She has career counseling experience working with University students and other adults, and has taught career planning, educational and career decision-making classes, and job search workshops)

★**PSch 0706 PROFESSIONAL SELLING FOR WOMEN: TECHNIQUES.** No credit, \$78 (age 62, \$68).

Provides women in sales careers with techniques in presenting themselves; identifying buyers' needs; developing effective questioning and listening skills; performing openings and closings; and handling buyer resistance. The role of the professional in selling is presented as a problem solver who provides a service to the buyer. Class format includes lecture and discussion, and practice of techniques through small groups and role playing. (Limited to 30)

Spec Term Sec 2 **M**—6-8, June 18-July 16 (5 meetings),
Washburn Library, 5244 Lyndale Ave S, Mpls, Mader
No late fee through June 11

(Lynda Galligan Mader is a professional sales consultant specializing in sales training workshops and seminars. She worked for Random House, Inc. for many years as Midwest Sales Manager and Training Director and has been author and co-author of major training manuals for that firm)

★**PSch 0709 PROFESSIONAL SELLING: SUCCESSFUL CLOSING SKILLS.** No credit, \$33 (age 62, \$23).

Most salespeople have a great deal of product knowledge and communicate well with people; however, when it comes to closing the sale, they often fall short of their expectations. This workshop examines the barriers salespeople, as well as clients, set up to inhibit the closing process. Topics include the steps to a successful sale, timing, trial closes, stalls, overcoming the fear of closing, effective closing strategies, and insuring repeat business. Workshop format includes lecture, discussion, and practice of techniques through case studies and role playing. (Limited to 25)

Spec Term Sec 2 **Sa**—9 a.m.-1, June 30 (1 meeting),
NCCE 140, Mader
No late fee through June 22
(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

(Lynda Galligan Mader is a professional sales consultant specializing in sales training workshops and seminars. She worked for Random House, Inc. for many years as Midwest Sales Manager and Training Director and has been author and co-author of major training manuals for that firm)

- ★**PSch 0713 STARTING A SUCCESSFUL CONSULTING BUSINESS.** No credit, \$60 plus \$6 special fee. Total \$66 (age 62, \$50 plus \$6 special fee. Total \$56). *Includes lunch.*

A practical seminar for people who want to be consultants either part-time or full-time. This program provides an overview of the consulting field, including an evaluation of the risks and rewards, and resources to help you get started. The particular situations which women encounter in the consulting business are addressed. Specific topics focus on identifying a market, starting with minimal expense, pricing your services, building a professional image, and avoiding costly mistakes. Resource materials provided. (Limited to 28. Limit is absolute—no instructor permission)

Spec Term Sec 3 **Sa**—9 a.m.-4, June 16 (1 meeting),
EBCEC 156, StP Campus, Moen
No late fee through June 8

(Marilyn Moen has been a consultant for 18 years, and is owner and director of Moen Training, Minneapolis. She has a network of more than 100 consultants and trainers in the Midwest)

- ★**PSch 0717 CONSULTING: SALES AND MARKETING SKILLS.** No credit, \$60 plus \$6 special fee. Total \$66 (age 62, \$50 plus \$6 special fee. Total \$56). *Includes lunch.*

One of the most challenging areas for new consultants is the area of sales and marketing. Yet, this can make a key difference to success in their career. This workshop helps the new or prospective consultant develop key promotional materials, explore free and low cost marketing methods, identify prospects, plan the sales interview, handle questions and concerns, improve sales/persuasion skills, increase the size of contracts, keep current clients, and expand profits. Resource materials provided. Participants are encouraged, although not required, to have participated in Starting a Successful Consulting Business (PSch 0713). (Limited to 28. Limit is absolute—no instructor permission)

Spec Term Sec 1 **Sa**—9 a.m.-4, July 28 (1 meeting),
EBCEC 156, StP Campus, Moen
No late fee through July 20

(Marilyn Moen has been a consultant for 18 years, and is owner and director of Moen Training, Minneapolis. She has a network of more than 100 consultants and trainers in the Midwest)

- ★**PSch 0734 SPEAKING AND LISTENING SKILLS FOR THE WORKPLACE.** No credit, \$97 (age 62, \$87).

Efficient and effective communication skills have never been more instrumental to success in business and the professions than they are today. This short course assists you in mastering the fundamentals of persuasive communication and accurate listening. Brief, substantive lectures are followed by specific-skill practice sessions. (Limited to 22)

Spec Term Sec 1 **W**—6-9, June 20-July 18 (4 meetings—no class July 4),
ClaOff 6, StP Campus, Bennett
No late fee through June 13
(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

noncredit courses

(J. Michael Bennett heads the College Reading and Public Speaking programs in the rhetoric department at the University of Minnesota. He frequently lectures and conducts seminars across the country in the areas of reading, writing, speaking, and listening)

★PSch 0748 ASSERTION SKILLS: WOMEN IN THE WORKPLACE. No credit, \$50 (age 62, \$40).

Relationships in the work setting, such as those with clients, superiors, and subordinates, may complicate the use of assertive behavior. This course examines the special considerations in deciding how, when, and where to be assertive in work situations, and how to increase personal effectiveness through verbal and nonverbal behavior. Includes an overview of assertion, methods of identifying the dynamics of a situation, rights and responsibilities of assertive behavior, choices and consequences of behaving assertively, and ways to build an assertive belief system. Opportunity to discuss and role-play situations involving assertion in the workplace. (Limited to 25)

Spec Term Sec 2 T—6-8, June 12-July 3 (4 meetings),
NCCE 229, Flower
No late fee through June 5

(Jill Flower is a counselor at the University of Minnesota Counseling Services, and is a doctoral student in the Counseling and Student Personnel Psychology Program. Her research interests include sex-role stereotyping)

★PSch 0770 CREATING AN EFFECTIVE IMAGE. No credit, \$70 (age 62, \$60).

Learn theory and gain practical insight into the communicative value of appearance. Examine influences of nonverbal elements of appearance, such as body characteristics, clothing, and mannerisms, on perception of personal identity, including personality, competency, and professional status. This course moves beyond formulas such as dressing for success or color selection by providing a knowledge base on which to create a unique, yet appropriate, image. Exercises analyzing your personal appearance components are included. (Limited to 25)

Spec Term Sec 2 T—6-8:30, June 12-July 3 (4 meetings),
McNH 197, StP Campus,
No late fee through June 5

(Ann Marie Fiore focused her doctoral studies at the University of Minnesota on the effect of appearance on self-esteem and taught in the Department of Design, Housing, and Apparel. She also provides image consulting services for women)

Human Development

★PSch 0802 ENHANCING SELF-ESTEEM. No credit, \$48 (age 62, \$38).

Self-esteem is not a constant, but a feeling or image that we have of ourselves that fluctuates over time and across situations. This course is designed to help you identify the thoughts, feelings, and behaviors that affect your sense of self and your relationships with others. The course provides tools for building and maintaining a positive self-image. Through lectures, discussions, and group activities, participants learn specific steps for increasing self-acceptance, developing confidence, setting and achieving goals, and overcoming barriers to change. This class is designed as an educational experience, not a therapy group. (Limited to 20)

Spec Term Sec 3 Th—9:15-11:15 a.m., June 21-July 12 (4 meetings),
MacP, Flower
No late fee through June 14

(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

(Jill Flower is a counselor at the University of Minnesota Counseling Services, and is a doctoral student in the Counseling and Student Personnel Psychology Program. Her research interests include sex-role stereotyping)

★PSch 0806 DIET DILEMMAS OF WOMEN. No credit, \$24 (no discount for persons 62 and older).

The "diet mentality" is an attitudinal focus on diet and weight loss. It operates in such a way that not only does it usually fail, but it also perpetuates itself. Learn how the diet mentality operates, why it frequently fails, and ways to reframe the way you think about and approach weight loss. Participants have an opportunity to talk with each other about weight issues. (Limited to 30)

Spec Term Sec 1 **M**—6-8, June 25, July 2 (2 meetings),
NCCE 229, Emerson
No late fee through June 18

(Nadine Emerson, licensed psychologist, is a consultant and counselor in private practice specializing in relationship issues, addiction, and personal growth. As a doctoral student at the University of Minnesota, she focused her research on the areas of control and anxiety)

★PSch 0810 MANAGING PERSONAL STRESS. No credit, \$24 (no discount for persons 62 and older).

Participants look at a simple model that illustrates how individuals process stress in different ways and how a negative cycle can be reversed. Characteristic responses to stress and the underpinnings of self-defeating responses are examined. Several stress management techniques are presented and experienced. (Limited to 30)

Spec Term Sec 2 **W**—6-8, June 13, 20 (2 meetings),
NCCE 235, Emerson
No late fee through June 6

(Nadine Emerson, licensed psychologist, is a consultant and counselor in private practice specializing in relationship issues, addiction, and personal growth. As a doctoral student at the University of Minnesota, she focused her research on the areas of control and anxiety)

★PSch 0826 BEING YOURSELF/BEING TOGETHER: SELF-ESTEEM AND INTIMACY. No credit, \$40 (age 62, \$30).

Frequently, there are challenges in attempting to balance a sense of self with involvement in an intimate relationship. This course focuses on developing intimacy skills while maintaining a clear sense of identity. These skills include understanding how our internal dialogue affects intimate behavior, and communication skills such as expressing emotions and resolving conflicts. Change strategies, such as learning to set boundaries and developing more positive self-talk, also are explored. Designed as an educational experience, not a therapy group. (Limited to 26)

Spec Term Sec 2 **T**—6-9, June 12, June 19 (2 meetings),
NCCE 235, Colgan
No late fee through June 5

(Philip Colgan is an instructor in the Department of Family Practice and Community Health at the University of Minnesota, and is a psychotherapist in private practice in Minneapolis)

★PSch 0832 DISCIPLINING YOUR CHILD. No credit, \$48 (age 62, \$38).

Disciplining your child involves developing both short-term and long-term goals.
(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

noncredit courses

This course examines the management and direction of children's daily behavior as well as ways to help children become people who like and value themselves and who can ultimately control themselves in socially acceptable ways. Successful techniques and strategies are presented and demonstrated which can be individualized for your child and situation. (Limited to 25)

Spec Term Sec 2 T—6-8, June 12-July 3 (4 meetings), WullH 130,
Mooney-McLoone
No late fee through June 5

(Ann Mooney-McLoone is an instructor in early childhood education and child development, and head teacher in the University of Minnesota Laboratory Preschool. She has given presentations at national conferences and parent education workshops, and is involved in ongoing research with the Institute of Child Development)

★**PSch 0851 INVESTMENTS AND PERSONAL FINANCIAL PLANNING.** No credit, \$47 (age 62, \$37).

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. *First session: Basic Financial Management Process.* Taking your financial inventory, personal budgeting and planning, determining goals and objectives for investment, retirement, future expenditures, and cash control procedures. Reviewing basic needs for savings, insurance, and wills. *Second session: Basics of Investments.* Basic features and considerations of investing in money market funds, bonds, preferred stocks, municipal bonds, bond funds, and stocks. *Third session: Putting It All Together.* Integrating your objectives with investment alternatives, basic tax considerations, and structuring an investment portfolio. (Limited to 40)

Spec Term Sec 2 T—6-8, June 12-26 (3 meetings), Walker Library,
2880 Hennepin Ave, Mpls, Whittlinger
No late fee through June 5

(Erica Whittlinger, M.B.A., is president of Whittlinger Capital Management Inc., an investment advisory firm)

★**PSch 0882 FRENCH FOR TRAVELERS.** No credit, \$69 (age 62, \$59).

A survival course for those with no previous knowledge of French. It will provide you with the basic French vocabulary necessary for coping with these everyday travel situations: changing money, obtaining train tickets and information, renting hotel rooms, shopping, ordering meals, asking directions, and understanding telephones, post offices, and public transportation systems. Increased knowledge of French and French culture will help you travel more adventurously and more economically. (Limited to 25)

Spec Term Sec 2 T—2-4, June 19-July 24 (6 meetings),
Walker Library, 2880 Hennepin Ave., Mpls.
No late fee through June 12

(The instructor will be an advanced graduate student in the Department of French and Italian)

★**PSch 0888 PERENNIAL PLANTS: IDENTIFICATION AND USE IN THE GARDEN.** No credit, \$86 (age 62, \$76).

Focus is on identification, cultural requirements, and landscape use of hardy summer blooming perennials. Learn plants by seeing them in the field; each lecture is held at a local garden or nursery. Classes meet twice monthly throughout the sum-
(continued next page)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

mer to enable participants to see the largest possible selection of plants. (Limited to 20)

Spec Term Sec 1 Th—6-8:30, June 14, 21, July 12, 19, Aug. 16, 23
(6 meetings), first session meets in NCCE 235, Burrell
No late fee through June 7

(C. Colston Burrell, former curator at the University of Minnesota Arboretum, is a landscape consultant, writer, and photographer with an M.S. in horticulture. He is currently a graduate student in the Department of Landscape Architecture)

★PSch 0889 LIVING COLOR: DESIGN AND IMPLEMENTATION OF FLOWER GARDENS. No credit, \$70 (age 62, \$60). \$65 for Arboretum members.

Just as vegetables provide food for the body, flowers provide a feast for the eyes. Learn how to create colorful landscapes with herbaceous plants incorporating both good design principles and good gardening techniques for lower overall maintenance. Review culture, selection, and use of annuals, herbaceous perennials, and tender and hardy bulbs, plus their unique design possibilities. Each session will include lecture, a garden visit on Arboretum grounds, and hands-on learning activities. No previous design experience needed. (Offered in cooperation with the Minnesota Landscape Arboretum. Limited to 25)

Spec Term Sec 1 MW—6-9, June 18, 20, 25, 27 (4 meetings),
Minnesota Landscape Arboretum, Auditorium,
3675 Arboretum Dr, Chanhassen, Hanchek
No late fee through June 11

(Anne Hanchek is assistant professor of horticulture science and an Extension Service environmental horticulturist. She is responsible for the development and coordinating of stateside educational programs in environmental horticulture, especially the Master Gardener Program)

University Access

★PSch 0901 HOW TO PREPARE FOR THE GRADUATE RECORD EXAMINATION (GRE). No credit, \$48 plus \$4 special fee. Total \$52 (age 62, \$38 plus \$4 special fee. Total \$42).

This workshop covers general test-taking skills as well as a review of the various types of verbal, quantitative, and analytical questions presented on the GRE General Test. In addition to learning test-taking strategies, participants complete test simulation exercises and formulate an individualized study plan. (Limited to 40. Limit is absolute—no instructor permission)

Spec Term Sec 3 T—6-8:30, Aug. 14-28 (3 meetings),
NCCE 140, Weinsheimer
No late fee through Aug. 7

(Joyce Weinsheimer is program director of the Learning and Academic Skills Center at the University of Minnesota. Her doctorate is in higher education and she has several years of experience in college teaching and counseling)

★PSch 0902 HOW TO PREPARE FOR THE GRADUATE MANAGEMENT ADMISSIONS TEST (GMAT). No credit, \$48 plus \$4 special fee. Total \$52 (age 62, \$38 plus \$4 special fee. Total \$42).

This workshop familiarizes participants with test-taking strategies for the GMAT. Discussions focus on the kinds of directions, materials, and questions presented in the quantitative and verbal sections of the test. Participants use their responses to

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Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

noncredit courses

test simulation exercises to develop an individualized study plan. (Limited to 40. Limit is absolute—no instructor permission)

Spec Term Sec 3 **T**—6-8:30, July 17-31 (3 meetings),
NCEE 140, Weinsheimer
No late fee through July 10

(Joyce Weinsheimer is program director of the Learning and Academic Skills Center at the University of Minnesota. Her doctorate is in higher education and she has several years of experience in college teaching and counseling)

★**PSch 0903 HOW TO PREPARE FOR THE PRE-PROFESSIONAL SKILLS TEST (PPST).** No credit, \$27 plus \$4 special fee. Total \$31 (no discount for persons 62 and older).

This test preparation series reviews the format and content of the PPST's proficiency tests in reading, mathematics, and writing. Workshop sessions provide a description of the content measured in a particular skill area, and discuss test-taking strategies for each type of question on the exam. Practice with sample test items provides the basis for developing an individualized study plan. (Limited to 40. Limit is absolute—no instructor permission)

Spec Term Sec 1 **TTh**—6-7:30, June 12, 14, 19 (3 meetings),
NCEE 140
No late fee through June 5

(Instructor, to be assigned, will be staff member in the Learning and Academic Skills Center at the University of Minnesota)

★**PSch 0915 GRAMMAR REFRESHER.** No credit, \$57 (age 62, \$47).

Has it been too many years since you studied subjects, verbs, and all those other forgotten terms? Do you labor over sentences and agonize over paragraphs? This class is designed for people who had a strong background in grammar (however many years ago), but who would like to review basic skills. It is intended for those considering returning to the classroom, those already in school and having problems with writing, and those who would like a refresher for personal correspondence. The class covers grammar, punctuation, sentence structure, and common problem areas. The class format includes lecture, exercises, and student participation. Students should plan to spend a few hours each week completing homework assignments. (Limited to 20)

Spec Term Sec 2 **M**—9-11 a.m., June 18-July 16 (5 meetings),
MacP, DeNoble
No late fee through June 11

(Jan DeNoble is a graduate student in English and a teaching assistant in the General College at the University of Minnesota)

★**PSch 0932 ELEMENTARY ALGEBRA.** No credit, \$132 (age 62, \$122).

Individualized instruction and group lecture in elementary algebra including signed numbers, solving equations, graphing, factoring, rational expressions, and roots and radicals. Option of taking self-graded quizzes to monitor progress during class. Prepares students for Intermediate Algebra. (Limited to 30)

Spec Term Sec 3 **M**—5:30-7:30, June 11-Aug. 20 (11 meetings),
RarigC 610, Robertson
No late fee through June 4

(Douglas Robertson is an associate professor in the Division of Science, Business, and Mathematics of the General College, and has worked in the Math Preparation Program since 1977. His research interests are in developmental mathematics education)

Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134. Courses and sections in red have limits on enrollment. See page 5.

Thinking About Going Back to School?

Come to Our FREE Workshop

If you have been thinking about going back to school and don't know where to begin, this informal workshop is for you. 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.

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.

The workshop will be held Thursday, August 9, from 6 to 9 p.m. in room 140 of the Nolte Center on the Minneapolis campus of the University. Limited to 50 participants. To add your name to the registration list for this free workshop, just give us a call at:

624-2388

Study and Travel Adventures Summer Offerings

Registrations for the following Study and Travel Adventure courses are taken only in room 180 Wesbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis, MN 55455.

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 pretrip lectures and limited tour size, ensures 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 for itineraries for these trips and others which will be scheduled during the year: 624-3300.** All costs 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.

Registrations may be charged to Visa and MasterCard.

Weekend STAs are designated as 08xx courses. Those with longer trips involved are designated as 09xx courses.

*STA 0815 BIRDS AND WILDFLOWERS OF MINNESOTA'S NORTH SHORE. June 15-17.

This weekend trip to Cascade Lodge along Minnesota's North Shore provides the opportunity to enjoy early summer in Minnesota's north woods. Treat yourself to the sound of a distant thrush, the sight of a colorful orchid in bloom, and the smell of a fir forest. There is an extensive trail system around the lodge which allows us to visit a number of different habitats and observe a wide array of species. Concentration is on bird and wildflower identification during local hikes in the area. Of course, there also is time to simply relax and enjoy the grandeur of the Lake Superior shoreline. (Limited to 20)

Registration is now open; deadline for registration is May 18. Registrations are accepted on a first-come, first-served basis. Register in person or by mail in 180 Wesbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis, MN 55455; or call (612) 624-3300 for more information.

Spec Term, Sec. 1, no credit, \$159 approximate price includes two nights lodging (double occupancy), three meals, and one pretrip lecture.

(Roger Eliason, group leader, is a field biologist with an avid interest in Minnesota's native plants and animals)

★STA 0923 THE WILDLIFE AND WILDLANDS OF ALASKA. July 27-Aug. 7.

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. The study tour includes the identification and natural history of Alaskan fish, birds, mammals, and vegetation of the major biomes. Study land use challenges and controversies, such as the subsistence hunting and fishing by native Alaskans and petroleum development. The tour is based in Anchorage with trips to Denali National Park, the Kenai Peninsula, and Valdez. Time also will be planned for participants to explore on their own. (Limited to 18)

Registration is now open; deadline for registration is May 15. Registrations are accepted on a first-come, first-served basis. Register in person or by mail in 180 Wesbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis, MN 55455; or call (612) 624-3300 for more information.

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Spec Term, Sec 1, no credit. \$2,000 approximate price includes all transportation, lodging, two breakfasts, two lunches, one dinner, and one pretrip lecture.

(James Cooper, associate professor of Fisheries and Wildlife at the University, leads the study tour. He has visited Alaska many times where he has done extensive wildlife research, particularly on the trumpeter swan)

Research Explorations (REX)

What is the Research Explorations Program?

Research Explorations (REX) offers the opportunity for public participation in field and laboratory projects of University faculty research.

Research projects for 1990 have been scheduled throughout Minnesota, as well as at other U.S. and international sites. Local research projects deal with the environment, natural resources, wildlife and resource management, social and health issues, and other topics. Several REX projects take place outside Minnesota: archaeological digs are scheduled in Maine and Germany, and a glaciological study is planned in Sweden.

REX participants share in the workload of the research team's day. Under the guidance of the project leader and staff, REX volunteers may be asked to hike, boat, climb, dig, or engage in other physical activities. Volunteers also may assist in data collection, observation, photography, sampling, questionnaires, interviews, and coding.

Volunteers enjoy experiential learning while advancing important research and expanding intellectual horizons.

Application Process

Volunteers apply for a project of choice. Applications are screened, and the project leader has final approval. **Persons interested in participating in the REX program should call (612) 626-0214 for registration materials and complete information, as well as for the application form.**

Many REX projects can accommodate only a limited enrollment.

Qualifications for REX Participation

The most important qualifications required of REX participants are commitment, common sense, and adaptability to different situations and cultures.

Many projects require general skills, such as observing, interviewing, and record keeping. Especially for field projects, camping or wilderness experience is also beneficial. Some projects do need more specific skills, such as training in electronics, computers, drafting, and photography.

The Contribution

REX volunteers contribute their share of the cost of participating in the project and are responsible for travel expenses. **Because REX participants are contributing money and time to research sponsored by the University of Minnesota, a tax-exempt organization, the amount of your contribution may qualify as a tax-deductible contribution.**

The contribution covers such costs as field and laboratory expenses, compilation of research findings, and program planning, implementation, and administration. Projects have different arrangements regarding accommodations, meals, ground transportation, and clothing and equipment needs, so cost coverage varies.

Volunteer contributions do not cover airfare, costs to and from the assembly site, visas, passports, inoculations, medical or other emergencies, or other personal expenses.

noncredit courses

Cancellation and Refunds

Payment of the required initial \$150 deposit is nonrefundable unless the University REX program cancels the research project or the applicant is not accepted as a project participant. The balance of the participant contribution will not be returned if the volunteer withdraws within 30 days prior to the project starting date (unless a replacement can be found). The research project depends on the financial contribution of the participant for advance costs. No returns or replacements can be made once the laboratory or field project has begun.

Orientation

Prior to participation, volunteers receive necessary information regarding project objectives, site conditions, laboratory and field activities and techniques, clothing and equipment needs, and health and entry requirements (for international projects). Direction and learning continue at the research site.

Project Expectations

The project leader is responsible for the involvement of the volunteer in the laboratory/field work of the research project. The project leader and REX staff reserve the right to end participation of any volunteer and require that the person leave the research site if he or she is unwilling to do the work, is unadaptable to the field conditions or to the research team, or does not adhere to University of Minnesota regulations and policies.

In some countries, the research team's presence requires governmental approval. Thus it is crucial to respect the customs and laws of the host country. Though advance planning is always conducted, sometimes unforeseen situations do arise. Understanding, adaptability, and cooperation are therefore essential for all research participants.

Academic Credit

Academic credit is available for participating in some REX projects. Those interested in earning credit should contact the REX director and the specific project leader regarding requirements. The amount paid toward receiving academic credits may not be deducted as a charitable donation.

REX 0105 THE IMPACT OF SOIL FERTILITY ON CROP PRODUCTIVITY. *Dates:* Schedule to be arranged; summer 1990. *Contribution:* \$150.

Vegetable growing is gaining importance in Minnesota, and soil fertility research to expand vegetable and small fruit production is part of this University of Minnesota Extension Services research project. Participants should enjoy outdoor and horticultural activities. Project leader is Associate Professor Carl Rosen, Department of Soil Science. Assembly point: S223 Soil Science, St. Paul campus. **Call 626-0214 for registration information and an application form.**

REX 0112 ON-FARM MANAGEMENT. *Dates:* October 1990—St. Paul campus; April 1990—Eyota. *Contribution:* \$150—St. Paul location; \$450 (includes room and breakfast only)—Eyota location.

On-farm research experiences at the University or in lovely, rolling southeastern Minnesota will concentrate on farm management of calving operations. Precalving procedures require close observation of the cows; proper nutrition and adequate housing are essential. Management practices are exceedingly important as profit margins decrease in the cattle industry. Researchers from the University of Minnesota's Department of Animal Science are conducting experiments on controlling time of calving by phase feeding, and they are developing identification record systems
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Read about symbols, page 31; abbreviations, page 127; and maps, pages 128-134.

tems for economic beef production. Volunteers will assist in the barn during calving, learning how to handle the new calves and seeing that the mother "owns" her offspring. They will help with identification records on each newborn calf and handle tattooing, dehorning, and other tasks. Project leader is Professor Charles Christians, Department of Animal Science. Assembly point: University of Minnesota Beef Barn, St. Paul, or Eyota, Minnesota ranch. **Call 626-0214 for registration information and an application form.**

REX 0118 BLUE JAY COMMUNICATION AND SOCIAL BEHAVIOR. *Dates:* Project begins April 1990 and continues through the summer; one or two days per week; preferably in the morning, for three to eight weeks; two to four hours per working day. *Contribution:* \$150.

Learn about current theories of evolution and communication by participating in "Blue Jay Communication and Social Behavior." Led by Professor Richard E. Phillips, this project studies both the behavior of individual blue jays and small social groups. It also evaluates genetic relationships within groups and their influence on social structure and communication. REX participants will make quantitative behavioral observations, sound recordings, and spectrographic analyses of jay calls. They will also help trap and color band blue jays. Participants will work outside at the Cedar Creek Natural History Area and must be willing to tolerate insects and normal weather conditions. Project leader is Professor Richard E. Phillips, Department of Ecology, Evolution, and Behavior. **Call 626-0214 for registration information and an application form.**

REX 0121 IMPACT OF AGRICULTURAL CHEMICALS ON GROUNDWATER. *Dates:* Schedule to be arranged; daily work for two to three weeks. *Contribution:* \$150.

REX participants in this project will study the movement of herbicides through soil to the groundwater. Working with the project's associate scientist and the project leader, REX participants will take water and soil samples in the field and assist in the analysis of collected samples (basic laboratory techniques will be taught). Project leader is J. L. Anderson, associate professor in the Department of Soil Science in the College of Agriculture. Assembly point: Pesticide Analytical Lab, Soil Science, St. Paul campus. **Call 626-0214 for registration information and an application form.**

REX 0130 STRESS EFFECTS ON LIVING PLANT CELLS. *Dates:* Schedule to be arranged. *Contribution:* \$150.

A study of varietal differences in plant cell membrane qualities based on resistance to water and salt stress. Seedlings exposed to these stresses will be evaluated through the light microscope. Some laboratory and microscopy experience would be helpful skills for a research volunteer. Project leader is Professor Eduard Stadelmann, Departments of Horticultural Science and Landscape Architecture. Assembly point: 228 Alderman Hall, St. Paul campus. **Call 626-0214 for registration information and an application form.**

REX 0131 CLINICAL VETERINARY MICROBIOLOGY. *Dates:* Schedule to be arranged. *Contribution:* \$150.

This study seeks the assistance of active or retired professional veterinarians in the use of clinical microbiology to define the etiology and select the therapy of animal diseases. Veterinarians selected to participate will take part in a one- to two-week training period. Volunteers will conduct studies in their own clinics for three to twelve months. Participants will gain improved diagnostic and therapeutic skills, and many will have the opportunity to publish or present results. Project leader is

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noncredit courses

Professor Gilbert Ward, Department of Veterinary Pathobiology. Assembly point: 300-C Veterinary Science Building, St. Paul campus. Call 626-0214 for registration information and an application form.

REX 0132 HOW DO BEETLES FIND HOST PLANTS? Dates: Summer 1990; schedule to be arranged. Contribution: \$150.

Plant odors help direct herbivorous insects to their host plants. This project documents the behavior and movements of beetles in response to odor distribution. Volunteers will assist in marking, releasing, and recapturing paint-marked beetles, as well as helping to collect plant odors in the field for later chemical analysis. Participants should enjoy outdoor work and have a steady hand in handling insects. Project leader is Professor Patrice Morrow, Department of Ecology, Evolution, and Behavior. Assembly point: Cedar Creek Natural History Area, Bethel, Minnesota. Call 626-0214 for registration information and an application form.

REX 0133 QUANTITATIVE GENETICS OF THE FRUIT FLY. Dates: Schedule arranged—approximately eight hours per week, day or evening hours—for one academic quarter. Contribution: \$150.

Quantitative genetics studies evolutionary changes in organisms. Typical research involves selecting extreme individuals from each generation as parents of the next, and studying how various conditions affect evolution of different characteristics. Because generation time is two weeks or less, the ideal organism of study is the fruit fly. Extremely fast, accurate, state-of-the-art equipment has been invented to measure many subjects. One system projects live flies onto a screen so that many points can be recorded directly into a computer for analysis. Another system measures the flying speed of many thousands of flies in a wind tunnel. Still other equipment measures resistance to gases such as ethanol vapor or carbon dioxide. (Flies recover well from these various processes.) Volunteers with an interest in biology or entomology who possess reasonable dexterity may enjoy this interesting research project. Project leader is Kenneth Weber, post-doctoral assistant, Department of Ecology, Evolution, and Behavior. Assembly point: 18 Zoology, Minneapolis campus. Call 626-0214 for registration information and an application form.

REX 0134 GLACIOLOGICAL STUDIES IN SWEDEN. Dates: Summer 1990. Contribution: costs not determined until dates are set, but participant may have to pay part of accommodations and meals, and will have to pay total airfare to and from Sweden.

Glaciological studies in northern Sweden will continue to focus on subglacial water drainage which is resulting in diurnal variations in water pressure. Water tracing experiments and measurements of surface tilt, strain, velocity, and internal deformation will help scientists understand the response of glaciers to variations in water pressure, and the effect of these variations on glacial erosion. A volunteer may be needed to operate and maintain the hot water drill used in this research. In addition, there may be a need for a volunteer with computer and electronic abilities to assist with data collection and monitoring. Project leader is Professor Roger Hooke, Department of Geology and Geophysics. Assembly point: Stockholm, Sweden, or field station in northern Sweden. Call 626-0214 for registration and an application form.

REX 0135 CENTRAL JAVA, INDONESIA: LANDSCAPE HISTORY OF THE DIENG PLATEAU. Dates: Schedule to be arranged. Contribution: To be determined.

Dieng, a small mountain village in an area famous for its scenery, volcanic fea-

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noncredit courses

tures, and mysterious Hindu temples, is the location for this REX project. Assist Professor Edward Cushing and several Indonesian scientists as they investigate a 4,000-year record of vegetation in a mountain area where Hindu temples, among the oldest in Indonesia, attest to intense human activity between about 750 and 1200 A.D. The results will aid understanding of the resilience of tropical forest to disturbance. Volunteers will assist by doing one or more of the following: (1) collecting and cataloging plants now growing near Dieng; (2) mapping the superficial geology there; (3) preparing a photographic essay of the area and the project. The ability to hike and work outdoors in rugged mountainous terrain, adaptability to the condition of a Third World nation, and an active interest in plants, natural history, and human culture are required for this project. Experience in photojournalism, plant taxonomy, or field botany would be helpful. Project leader is Edward J. Cushing, professor, Department of Ecology, Evolution, and Behavior. Assembly point: Yogyakarta, Java, Indonesia. **Call 626-0214 for registration information and an application form.**

REX 0209 KELHEIM—ORIGINS OF A CELTIC IRON AGE CITY. *Dates:* June 25-July 7, 1990; volunteers may participate for one or two weeks. *Contribution:* To be determined.

In late June and early July 1990, a team of students and volunteers will work with Professor Peter S. Wells at the Late Iron Age urban site of Kelheim in Bavaria, Germany. Volunteers will assist in mapping areas to be excavated, excavating portions of the prehistoric settlement, and processing the archaeological finds in the field laboratory at the local museum. Previous excavations explored house floors and storage pits on the Iron Age settlement and yielded large quantities of Iron Age pottery, wall plaster from buildings, iron tools, bronze ornaments, glass jewelry, and Celtic coins, all dating between 150 B.C. and 50 B.C. Project leader is Peter S. Wells, director of the Center for Ancient Studies, and professor in the Department of Anthropology. Assembly point: Kelheim, Bavaria, Germany. **Call 626-0214 for registration information and an application form.**

REX 0229 PREHISTORIC CERAMICS IN MINNESOTA. *Dates:* Schedule to be arranged. *Contribution:* \$150.

This study focuses on prehistoric artifacts recovered in Minnesota. Research volunteers are needed to assist in identification, sorting, and recording information regarding these prehistoric ceramics. Project leader is Professor Guy Gibbon, Department of Anthropology. Assembly point: Archaeology lab, Ford Hall, Minneapolis campus. **Call 626-0214 for registration information and an application form.**

REX 0234 MISSIONARIES AND THE CONQUEST OF HONDURAN INDIANS. *Dates:* Schedule to be arranged. *Contribution:* \$150.

Permanent mission stations, intended to "civilize" the Indians, were established in Honduras as early as 1545. Local and regional archives have produced a large collection of copies of 16th- and 17th-century documents relating to these Central American missions. Assistance is needed to transcribe and translate these Spanish documents about early colonial life of the Honduran Indians and the Mercedarian Order mission system. Fluency in the Spanish language is required, and academic credit may be available through directed study. Project leader is Professor John Weeks, Humanities and Social Sciences libraries, and adjunct faculty, Departments of Anthropology and Latin American Studies. Assembly point: 5 Wilson Library, Minneapolis campus. **Call 626-0214 for registration information and an application form.**

noncredit courses

REX 0236 TACKLING PUBLIC PROBLEMS IN A WORLD WHERE NO ONE'S IN CHARGE. *Dates:* Schedule to be arranged. *Contribution:* \$150.

Volunteers will test a workbook designed for groups seeking to affect public policy. The workbook, prepared by faculty of the Hubert H. Humphrey Institute of Public Affairs, provides guidance to groups developing strategies for collectively tackling public issues and problems. It will assist groups in choosing strategies appropriate to different stages in the public policy change cycle; it will also help groups that are in the various stages of tackling such public issues or problems as teen pregnancy, welfare dependency, or neighborhood crime. Volunteers will set up workshops for filling out and evaluating the workbook, compile results, provide written reports to the involved groups, and modify the workbook as needed. Project leader is John Bryson, professor in the Hubert H. Humphrey Institute of Public Affairs. Assembly point: 261 Hubert H. Humphrey Center, Minneapolis campus. **Call 626-0214 for registration information and an application form.**

REX 0301 NUTRITION AND ORAL HEALTH OF THE ELDERLY. *Dates:* Schedule to be arranged. *Contribution:* \$150.

Although nutrition in older adults is a known factor in overall health care, little attention has been given to oral health of the elderly. By interviewing nursing home residents and working with nurses, nutritionists, medical records, and other sources, researchers gather data to understand the connection between good nutrition and good oral health. This understanding will lead to educational programs and materials. Volunteers will assist in collecting, recording, and synthesizing data from interviews and lab tests. Project leader is Dr. Nelson Rhodus, a research professor in the Division of Oral Diagnosis and Radiology. Assembly point: 7-536 Moos Tower, Minneapolis campus. **Call 626-0214 for registration information and an application form.**

REX 0322 THE ART AND SCIENCE OF ORTHODONTICS. *Dates:* Schedule to be arranged. *Contribution:* \$150.

This research has two dimensions. One project involves the development and use of a FORTRAN program to quantify data regarding occlusion, or mismatch, of jaw alignment. This data will lead to new surgical techniques to alleviate the problem. A second project examines the use of stereophotogrammetry (contour mapping) in the clinical analysis of the facial form. Volunteers will be involved in manipulating data on computers and observing and assisting orthodontic clinic staff. Project leader is Dr. Dianne Rekow, Division of Orthodontics. Assembly point: 6-320 Moos Tower, Minneapolis campus. **Call 626-0214 for registration information and an application form.**

REX 0323 PREDICTING DIABETES. *Dates:* Schedule to be arranged. *Contribution:* \$150.

Juvenile, or Type I, diabetes is a disease affecting children with multiple life-threatening problems for the rest of their lives. This work attempts to uncover latent damage in children which later would lead to overt and irreversible diabetes. Once prediabetic children have been identified, researchers hope (through new treatments becoming available) to reverse or stop this latent, ongoing damage and prevent the onset of diabetes. Volunteers will contact and interview families with diabetic and prediabetic children; they also will help tabulate and input data into the project's computer data base. Medical, nursing, or public health background preferred, but not required; volunteers should possess effective communication skills. Project leader is Dr. Jose Barbosa, Department of Internal Medicine. Assembly point: 6-150 Phillips- Wangensteen Building, Minneapolis campus. **Call 626-0214 for registration information and an application form.**

REX 0324 ALCOHOL AND DEGENERATIVE DISEASES. *Dates:* Schedule to be arranged. *Contribution:* \$150.

Alcohol consumption may have a role in the etiology and/or prognosis of various degenerative diseases such as coronary heart disease. The purpose of this study is to develop lab tests for quantification of long-term alcohol consumption. Research volunteers may be involved in lab work, using computer software on protein analysis; they may also input crucial data into a computer data bank. Some familiarity with basic laboratory procedures and equipment would be helpful. Project leader is Dr. Myron Gross, research associate, Division of Epidemiology. Assembly point: 1-144 Health Sciences Unit A, Minneapolis campus. **Call 626-0214 for registration information and an application form.**

REX 0327 EVALUATING THE EFFECTIVENESS OF OB/GYN INSTRUCTIONAL SITES. *Dates:* Schedule to be arranged. *Contribution:* \$150.

Benjamin Bornshtein and Dr. Virginia Lupo are seeking the assistance of a research volunteer to evaluate the teaching behavior of residents and physicians, and to analyze the effectiveness of various obstetrics and gynecological instructional sites. Activities will include observing medical students and physicians in their work, and the reading and coding of evaluation and assessment instruments. Volunteers should exhibit attention to detail and the ability to synthesize information from written texts. Some experience in program evaluation is preferred, whether from a business or educational perspective, and basic computer knowledge also is recommended. Medical background is unnecessary. Project leaders are Benjamin Bornshtein, director of Medical Education for the Department of Obstetrics and Gynecology, and Dr. Virginia Lupo, assistant professor, Department of Obstetrics and Gynecology. Assembly point: 12-182 Moos Tower, Minneapolis campus. **Call 626-0214 for registration information and an application form.**

REX 0328 TREATMENT INFORMATION FOR MENTAL HEALTH AND BEHAVIOR PROBLEMS IN PERSONS WITH MENTAL RETARDATION. *Dates:* One to two days per week for ten weeks (days or evenings). *Contribution:* \$150.

This project will survey published research about treatment of both behavior and mental health problems in persons with mental retardation. The goal is to produce a data base that will serve as a model for a nationally accessible information service. Volunteers will locate and abstract pertinent information from all published research between 1985 and 1990 and enter it into the data base. The ability to read English-language research reports and to keep accurate records is required. Computer skills and knowledge about mental retardation and psychological and medical interventions are desirable, but not required. Project leader is Bruce Bakke, research fellow at the Institute for Disabilities Studies. Assembly point: Institute for Disabilities Studies, 2221 University Ave. SE, #145, Minneapolis. **Call 626-0214 for registration information and an application form.**

REX 0329 CHRONOBIOLOGICAL BLOOD PRESSURE MONITORING. *Dates:* Schedule to be arranged. *Contribution:* \$150.

REX participants will recruit volunteers to obtain reference standards on blood pressure variation during a 48-hour span, and teach them how to use the measurement instrumentation. REX participants could also analyze their own chronobiological data. Project leaders are Germaine Cornelissen, research associate, and Dr. Franz Halberg of the Department of Laboratory Medicine and Pathology in the Medical School. Assembly point: Chronobiology Laboratories, 5-183 Lyon Labs, Minneapolis campus. **Call 626-0214 for registration information and an application form.**

noncredit courses

REX 0330 DIAGNOSIS AND TREATMENT OF GENETIC DISEASES. *Dates:* Schedule to be arranged; one or two days a week, two to four hours a day. *Contribution:* \$150.

By being involved in laboratory research and/or database analysis, REX volunteers will learn about human genetic diseases, current treatments, and newborn screening. In addition to attending weekly laboratory meetings, the REX participant will be active in one of several ongoing projects, including: a newborn screening program to diagnose affected infants; preparation and analysis of an interactive research newsletter; and biochemical and/or molecular genetic tests of diseases being studied for experimental gene therapy treatment. Project leader is Dr. Chester B. Whitley of the Medical School's Department of Pediatrics and the Institute of Human Genetics. Assembly point: 4-140 Moos Tower and 13-123 Phillips-Wangensteen Building, Minneapolis campus. **Call 626-0214 for registration information and an application form.**

REX 0331 MEASURING NEUROPSYCHOLOGICAL FUNCTIONING IN THE ELDERLY. *Dates:* Schedule to be arranged; ten weeks, minimum of eight hours per week. *Contribution:* \$150.

This project seeks to obtain normative data on neuropsychological tests of such functions as memory and problem solving among older adults. Three hundred healthy older adults are being tested. The REX participant will score psychological tests and enter psychological test data into a computer; the participant is also invited to attend weekly neuropsychology case conferences. Project leader is Kathy Christensen, assistant professor in the Medical School's Department of Neurology. Assembly point: Veterans Administration Medical Center, Minneapolis. **Call 626-0214 for registration information and an application form.**

REX 0332 MOLECULAR BASIS OF STREPTOCOCCAL VIRULENCE. *Dates:* Schedule to be arranged; approximately 15 hours per week for three or more weeks. *Contribution:* \$150.

Want to explore the field of microbiology? This project studies the biochemical determinants of streptococcal pathogenesis: what genes and their products assist these bacteria in their capacity to infect the human throat? REX participants can be involved in activities that correspond to their level of skill. Possible work includes measuring human immunological response to streptococcal infection, and comparing the capacity of genetic variants of streptococci to colonize mice. Applicants must know sterile techniques as well as how to make chemical solutions; some training will be provided. Project leader is P. Patrick Cleary, professor, Department of Microbiology. Assembly point: 935 Mayo Memorial Hospital, Minneapolis campus. **Call 626-0214 for registration information and an application form.**

REX 0603 DISABLED PERSONS AS TEACHERS. *Dates:* Once a week for a minimum of five weeks; five week period arranged between June 1, 1990 and May 31, 1991. *Contribution:* \$150.

The purpose of this project is to examine the lives of disabled persons who are, or are training to become, teachers. Volunteers will interview disabled preservice and licensed teachers to learn about their career choice, the factors that have helped or hindered their training and employment, and adaptations they have used to function as teachers. Volunteers will also prepare interview transcripts and analyze interview data. Volunteers need strong interpersonal skills and adequate typing skills. Experience with the disabled and familiarity with Macintosh computers helpful but not necessary. Project leaders are professors Clayton Keller of the College of Education and Human Service Professions and Vern Simula of the Department of Child and Family Development. Assembly point: 120 Montague Hall, Duluth campus. **Call 626-0214 for registration information and an application form.**

REX 0604 EXPLORING DRIVER SIMULATION. *Dates:* Schedule to be arranged; approximately four hours a week for about ten weeks. *Contribution:* \$150.

The goal of this project is to set up a laboratory-based driving simulator and to compare experimental results from this facility with those from field testing. REX participants will be involved in every phase of the project—set-up, performance, and data analysis. Project leader is P. A. Hancock, associate professor in the physical education department in the College of Education. Assembly point: Norris Gym (tentatively). **Call 626-0214 for registration information and an application form.**

REX 0802 ARTISTIC DISCOVERY IN 17TH-CENTURY NAPLES. *Dates:* Schedule to be arranged for one academic quarter. *Contribution:* \$150.

Although Caravaggio, an Italian Baroque painter, has become familiar to many today, Caracciolo, another artist greatly influenced by him, still remains relatively unknown and enigmatic. Professor Michael Stoughton, art historian, has been working on what will be the first book-length study of Caracciolo. He seeks the assistance of a research volunteer to translate and transcribe Latin documents about the artist's life. The project also involves library research on iconography of the Carmelite and Carthusian religious orders. Project leader is Professor Michael Stoughton, Department of Art History. Assembly point: 107 Jones Hall, Minneapolis campus. **Call 626-0214 for registration information and an application form.**

REX 0902 THE ORIGIN OF ENGLISH WORDS. *Dates:* Schedule to be arranged; flexible hours. *Contribution:* \$150.

Did you know that you can trace the history of how we know what we know by studying the etymology of words. For example, by studying the origins of the word *imagination*, you can glimpse the historical tension between rational and intuitive knowledge. If you enjoy puzzles like this, consider participating in this project. Volunteers will undertake the extremely detail-oriented work of copying and comparing etymologies from different sources. Project leader is Anatoly Liberman, professor in the German department. Assembly point: Wilson Library, Minneapolis campus. **Call 626-0214 for registration information and an application form.**

Elderhostel (for those over 60)

The University of Minnesota, along with several other Minnesota colleges, offers persons 60 and older a sampling of college life through a program called Elderhostel. The colleges will offer week-long programs of residential continuing education for anyone 60 and over who has a desire to explore new ideas and meet new people, young and old. In its 13th year in Minnesota, Elderhostel is part of a national network that began 16 years ago.

Hostelers live in college dormitories, interact with peers, and experience the role of student in specially designed academic but noncredit courses. There are no exams, no grades, and no previous educational requirements. Courses are taught by regular college faculty. The cost for a one-week program is \$250 for food, lodging, and class instruction.

June 3-9, Itasca State Park: **Deep in the Virgin Forest—Spring in the Mississippi Headwaters Country.**

July 22-28 and July 24-30, Minneapolis Campus: **Sommerfest '89—A Viennese Music Festival.**

June 24-30, St. Paul Campus: **Who Decides—Moral Issues in Contemporary Society; Contemporary African Politics; Tin Pan Alley Revisited.**

Sept. 30-Oct. 6, Itasca State Park: **Deep in the Virgin Forest—Autumn in the Mississippi Headwaters Country.**

Call 624-7004 for details and registration instructions.

General Information

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 Extension Classes

While the state legislature has begun to help fund Continuing Education and Extension, the Extension Classes program—including instructional, administrative and staff costs and related costs—is supported mainly by students' tuition. Therefore, depending on overall enrollments, program adjustments are sometimes necessary, as is the cancellation of classes in which enrollment is low.

Campus Services

Recreational Sports Facilities

An Extension student may use the sports facilities of the University, during scheduled recreation hours, through either of the following methods.

1. Students registered for three or more credits may pay a sports facilities fee (\$8 per 5-week summer term, subject to change) that entitles them to use University facilities and participate in Recreational Sports programs. The sports facilities fee should be paid at the time of registration in the Extension registration office in Westbrook Hall. The sports facilities fee is entered on a receipt separate from the course fee statement. Students must present the receipt when they wish to use sports facilities.

If students cancel classes, they must surrender the facilities fee receipt at the time of cancellation. The University reserves the right to cancel sports facility permits of students who cancel classes and do not surrender the permit.

The sports facilities permit 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 credits, or who are registered in noncredit courses, must purchase a Recreational Sports Participation Permit if they wish to use sports facilities. Call 625-6800 after June 1 to find out participation permit costs; identify yourself as an Extension student.

Recreational Sports Participation Permits may be purchased at Cooke Hall. Proof of enrollment (the student's receipted copy of the registration form) is required.

Recreational sports facilities include swimming pools, tennis courts, gymnasiums, racquet courts, fields, and other areas on both the Minneapolis and St. Paul campuses. Separate towel and locker rental is also available.

Since facilities are heavily used, often to capacity, their use may be restricted occasionally.

Services for Students with Disabilities

Adapted services and procedures are possible throughout the University of Minnesota. Information, referral, accommodations, advocacy, and support are available for students and prospective students with physical, sensory, learning, and emotional disabilities. Students are encouraged to contact the Extension Counseling Office, 314 Nolte Center, 625-2500 or the Office for Students with Disabilities, 16 Johnston Hall, 624-4037 (voice or TDD).

Health Service (624-8400)

Students registered for at least one Extension class and spouses of students may use Boynton Health service on a fee-for-service basis. Students who are admitted to a University of Minnesota degree or certificate program and who are registered for at least one Extension class have the additional option of enrolling in Boynton's Extended Coverage Plan. This prepaid plan entitles students to receive certain outpatient services at no charge and to receive others at reduced cost.

The cost of the Extended Coverage Plan is: 10-week term plus 4-week interim, \$98; first 6-week term, \$35; second 5-week term plus 4-week interim, \$63; interim only, \$35. Extended coverage may be purchased at the cashier's window, second floor, Boynton Health Service between 8 a.m. and 5 p.m. Be sure to bring your Extension fee statement and proof that you are in a certificate or degree program (your day-school transcript or a letter from your advisor). Coverage must be purchased by June 18 for first summer term or July 25 for second summer term.

Students who pay the extended coverage fee receive general medical care and laboratory tests at Boynton at no charge. Partial charges are made for routine physical examinations and some specialty care. Full fees are charged for prescription drugs, eye glasses, and dental care. Mental health services, x-rays, and minor surgical procedures are charged to students for collection from their insurance. Any balance after insurance is covered by the extended coverage fee with no out-of-pocket expense to the student. Students who do not have insurance must pay full charges for these services.

The Extended Coverage Plan does not cover hospitalization or surgery. Extension students who have paid for extended coverage may purchase the University-sponsored hospitalization insurance offered to day-school students.

To obtain brochures describing both of these plans in greater detail, stop by 101 Westbrook Hall or call 625-3333 and ask that the Boynton Health Service literature be sent to you. For specific questions concerning the Extended Coverage Plan, call 624-1471. For insurance questions, call 624-0627.

Boynton Health Service is located on the East Bank at 410 Church St. S.E. Hours are 8 a.m. to 5 p.m., Monday through Friday; closed holidays.

When the Health Service is closed, emergency care is available at the Emergency Department of University Hospital. If you belong to the Extended Coverage Plan, one-half of the eligible charges that are not collectible from your hospitalization insurance (excluding take-home drugs and supplies) will be paid by Boynton. Students who do not have both extended coverage and hospitalization insurance and students who use emergency rooms other than the University Hospital emergency room are responsible for the entire emergency room bill. Follow-up care after an emergency must be obtained at Boynton to be covered.

Libraries

The University of Minnesota—Twin Cities Libraries contain more than 4 million catalogued volumes. In addition to books and periodicals, the libraries have substantial holdings of government documents, manuscripts, archives, phonograph records, audiovisual tapes, and other materials.

Humanities and social science collections: The main humanities and social sciences collections are in Wilson Library on the West Bank and include American studies, anthropology, art, business, film, geography, history, language, literature, philosophy, political science, religion, sociology, and women's studies. The collections for education, library science, and psychology are found in Walter Library on the East Bank. The collections in design, vocational education, family social science, rural sociology, and textiles are found in the St. Paul Central Library on the St. Paul campus.

Science collections: The main science and technology collection, including chemistry, engineering, geology, and physics is housed in the Science and Engineering Library in Walter Library. The health science collections, including allied health, dentistry, medicine, mortuary science, nursing, pharmacy, and public health are in the Bio-Medical Library in Diehl Hall on the East Bank. The agricultural and biological sciences collections are found in the St. Paul Central Library on the St. Paul campus.

Many **subject collections** are located in other buildings, as well. Call for locations on materials in horticulture, architecture, entomology, mathematics, forestry, plant pathology, law, journalism, maps, music, public affairs, government publications, biochemistry, natural history, East Asia, South Asia, and the Middle East. Special collections exist for children's literature, social welfare history, and other areas.

Reference and research service points are located in major library buildings: for humanities and social sciences, Wilson Library, first floor; for education and psychology, Walter Library, first floor; for business, Wilson Library, second floor; for government publications, Wilson Library, fourth floor; for bio-medical subjects, Diehl Hall, third floor; for science and technology, Walter Library, second floor; and on the ground floor of the St. Paul Campus Central library.

Terminals to access LUMINA, the University Libraries' on-line catalog, are available in all of the libraries. It is also possible to dial in to LUMINA using a personal computer and modem. To connect to LUMINA, dial 626-2206. For hardware or software problems, call 626-2272.

Specialized services of University Libraries include in-depth reference service, library instruction, computer-literature searching, inter-library borrowing, and photocopying.

Continuing Education and Extension students are encouraged to use library services. A current fee statement (the student's receipted copy of the registration form) is needed to borrow materials. For library hours, call 624-4552.

Locker Rental Service and Lost and Found

Lockers are available for \$2.50 for a half locker and \$4.25 for a full locker per quarter. Deposit cards must be purchased (cost is \$20) on the campus you are renting a locker: Coffman Union Service Center, East Bank; West Bank Cashier Section, Burs (W); and St. Paul Cashier Office, 107 Coffey Hall.

Locker rental offices are at the Service Center in Coffman Union for the East Bank, the Periodical Shop, 48 SocSci, for West Bank, and on the St. Paul campus at 213 Agricultural Engineering and 32 McNeal Hall. For more information, call the East Bank main office at 625-0981.

For lost and found assistance, check the lost and found office in the building where you may have lost items. For additional help and information, contact one of the main lost and found offices: Coffman Union Information Desk, 625-4177 or 625-0457 for East Bank; 100 West Bank Union Skyway, 624-5200, for West Bank; and the Coffey Hall Post Office, 625-8284, for the St. Paul campus.

The Coffman Union Service Center, on the ground level of Coffman Union, in addition to locker rental, offers several other services: postal services; MTC monthly pass and commuter ticket sales; parking coupons; discount movie passes; and campus bus (Route 13) punch cards.

Parking Facilities

Parking is available for Extension students at a fee. Call 624-2388 to request a parking and campus map. For parking information, call 625-2862 or 625-6566.

Parking for handicapped students—For information on parking for the handicapped, call the University Police Department, 624-3550 or the State of Minnesota Special Permits Division at 296-6911.

Police Services

The University Police Department is your full-service law enforcement agency for the campus community, available to Extension students as to others, for responsive crime control, emergency, and other related public service and assisting roles.

Strategic priorities of prevention, interception, and investigation are implemented by almost one hundred employees, including over forty security monitors who are University students providing building security, crime reporting, and rules enforcement. Regular officers are extensively trained, certified according to state standards, and completely authorized agents of the criminal justice system. You are urged to help them help you—report crimes, take advantage of informational and prevention programs by the department, and by all the

means that can be achieved together—protect yourself. Contact University Police from any campus phone by dialing the appropriate telephone numbers listed below:

Police-Fire-Emergency (only)	911
Escort	624-WALK
Non-urgent contacts (dispatcher)	624-7828
Chief of Police	624-2575
All other (including program requests)	624-3550

Arts and Entertainment

Educational and cultural events are offered regularly on the University campuses. Some are open to the public and student body without charge.

The Department of Concerts and Lectures presents the Northrop Dance Season and a wide array of other arts and entertainment events. For information about performances, call the Northrop Ticket Office, 624-2345. For information about University Theatre productions, call the ticket office (625-4001).

Also check student and local newspapers' entertainment sections for events.

Degrees and Certificates

Below are listed degrees and certificates which can be completed entirely or almost entirely through Extension Classes. For complete information, call the Extension Counseling Office, telephone 625-2500, to arrange day or evening advising. For complete information, see page 579 in the 1989-90 Extension Classes Bulletin.

Degrees

General College

Associate in Arts (A.A.); all requirements must be completed by Sept. 15, 1991.

Bachelor of Applied Studies (B.A.S.); only for previously admitted students. No new admissions.

Bachelor of General Studies (B.G.S.); only for previously admitted students. No new admissions.

College of Liberal Arts

Bachelor of Arts (B.A.)

Bachelor of Science (B.S.)

Bachelor of Individualized Studies (B.I.S.)

Carlson School of Management

Bachelor of Science in Business (B.S.B.)

Institute of Technology

Bachelor of Civil Engineering (B.C.E.)

Bachelor of Computer Science (B. Comp. Sci.)

University College

(B.A. and B.S.)

The Inter-College Program

Program For Individualized Learning

(formerly University Without Walls)

College of Agriculture

Bachelor of Science in Food Science (B.S.)

College of Home Economics

Bachelor of Science in Food Science (B.S.)

Graduate Degrees

Master of Arts in English (Graduate School)

Master of Agriculture in Food Technology (College of Agriculture)

Master of Business Taxation (M.B.T.)

Graduate Minor Program in Gerontology

Certificates

Check the list in the 1989-90 Extension Classes Bulletin, page 604.

For free academic advising, telephone 625-2500

Campus Buildings

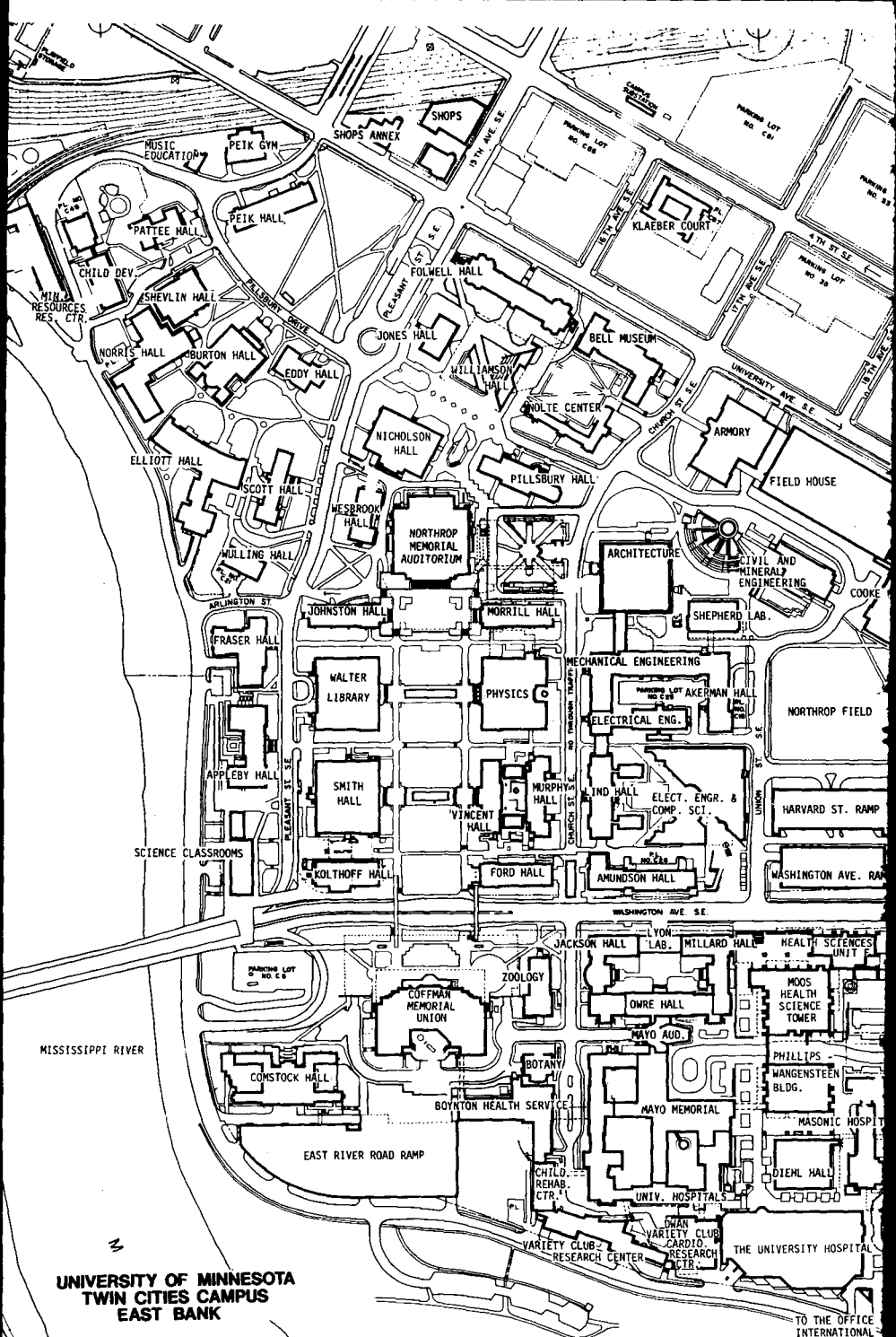
AgEng, *Agricultural Engineering (St. Paul)*
AkerH, *Akerman Hall*
AlderH, *Alderman Hall (St. Paul)*
AmundH, *Amundson Hall*
AndH, *Anderson Hall (West Bank)*
Aph, *Appleby Hall*
Arch, *Architecture*
ArtB, *Art Building (West Bank)*
BellMus, *Bell Museum of Natural History*
BioSci, *Biological Sciences Center (St. Paul)*
BlegH, *Blegan Hall (West Bank)*
BuH, *Burton Hall*
CentLib, *Central Library (St. Paul)*
ChDev, *Child Development*
CivMinE, *Civil and Mineral Engineering*
ClaOff, *Classroom Office Building (St. Paul)*
CookeH, *Cooke Hall*
EBCEC, *Earle Brown Continuing Education Center (St. Paul)*
EE/CSci, *Electrical Engineering/Computer Science Building*
EIH, *Elliott Hall*
FergH, *Ferguson Hall (West Bank)*
FolH, *Folwell Hall*
FordH, *Ford Hall*
HckrH, *Haecker Hall (St. Paul)*
HHHCtr, *Humphrey Center (West Bank)*

Intermedia Arts, *Intermedia Arts of Minnesota (425 Ontario S.E., formerly UC Video)*
JonesH, *Jones Hall*
KolthH, *Kolthoff Hall*
Law, *Law Building (West Bank)*
MacP, *MacPhail Center, 1128 LaSalle Avenue, downtown Minneapolis*
MechE, *Mechanical Engineering*
McNH, *McNeal Hall (St. Paul)*
MoosT, *Moos Tower (formerly HSUnit A)*
MurH, *Murphy Hall*
NCCE, *Noite Center for Continuing Education*
NorrisH, *Norris Hall*
NorthH, *North Hall (St. Paul)*
PeikH, *Peik Hall*
Phys, *Physics*
PillsH, *Pillsbury Hall*
RarigC, *Rarig Center (West Bank)*
SciCB, *Science Classroom Building*
VinH, *Vincent Hall*
VoTech, *Vocational-Technical Education (St. Paul)*
WaLib, *Walter Library*
WullH, *Wulling Hall*

Departments, Course Designators

Acct, *Accounting*
Afro, *Afro-American and African Studies*
AmSt, *American Studies*
AnSt, *Ancient Studies*
Anth, *Anthropology*
Arch, *Architecture*
Arth, *Art History*
ArtS, *Studio Arts*
Biol, *Biology*
BGS, *Business, Government, and Society*
BFin, *Business Finance*
BLaw, *Business Law*
CPsy, *Child Psychology*
Chn, *Chinese*
Clas, *Classics*
CSch, *Compleat Scholar*
Comp, *English Composition*
CSci, *Computer Science*
Dnce, *Dance*
Dsgn, *Design*
EAS, *East Asian Studies*
Econ, *Economics*
Engl, *English (language and literature)*
EngW, *English (creative and professional writing)*
FSoS, *Family Social Science*
Fren, *French*
Frit, *French and Italian*
GC, *General College*
Ger, *German*
Hist, *History*
Hmg, *Hmong*
Hort, *Horticulture*
Hum, *Humanities*
IEOR, *Industrial Engineering/Operations Research*
IR, *Industrial Relations*
IDSc, *Information and Decision Sciences*

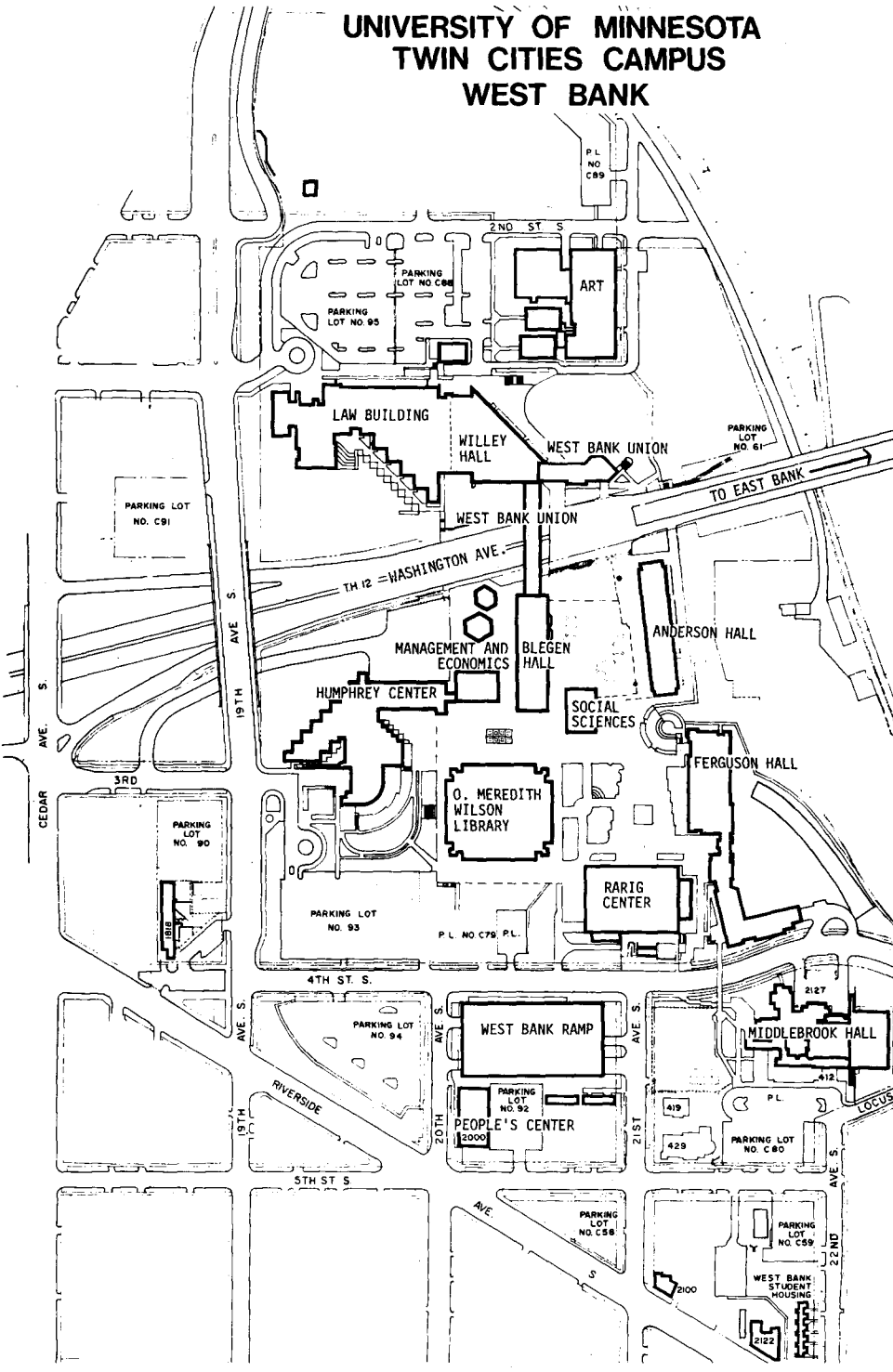
Jpn, *Japanese*
Jour, *Journalism and Mass Communication*
LA, *Landscape Architecture*
Lat, *Latin*
LASK, *Learning and Academic Skills*
Ling, *Linguistics*
Mgmt, *Management*
Mktg, *Marketing*
Math, *Mathematics*
ME, *Mechanical Engineering*
Mus, *Music*
OMS, *Operations and Management Science*
Phil, *Philosophy*
PBio, *Plant Biology*
Pol, *Political Science*
Port, *Portuguese (see Spanish)*
PSch, *Practical Scholar*
Psy, *Psychology*
PubH, *Public Health*
REX, *Research Explorations*
Rhet, *Rhetoric*
Scan, *Scandinavian*
Soc, *Sociology*
Span, *Spanish*
Spch, *Speech-Communication*
Stat, *Statistics*
STA, *Study and Travel Adventures*
TexC, *Textiles and Clothing*
VoEd, *Vocational Education*
WoSt, *Women's Studies*
YoSt, *Youth Development and Research*



**UNIVERSITY OF MINNESOTA
TWIN CITIES CAMPUS
EAST BANK**

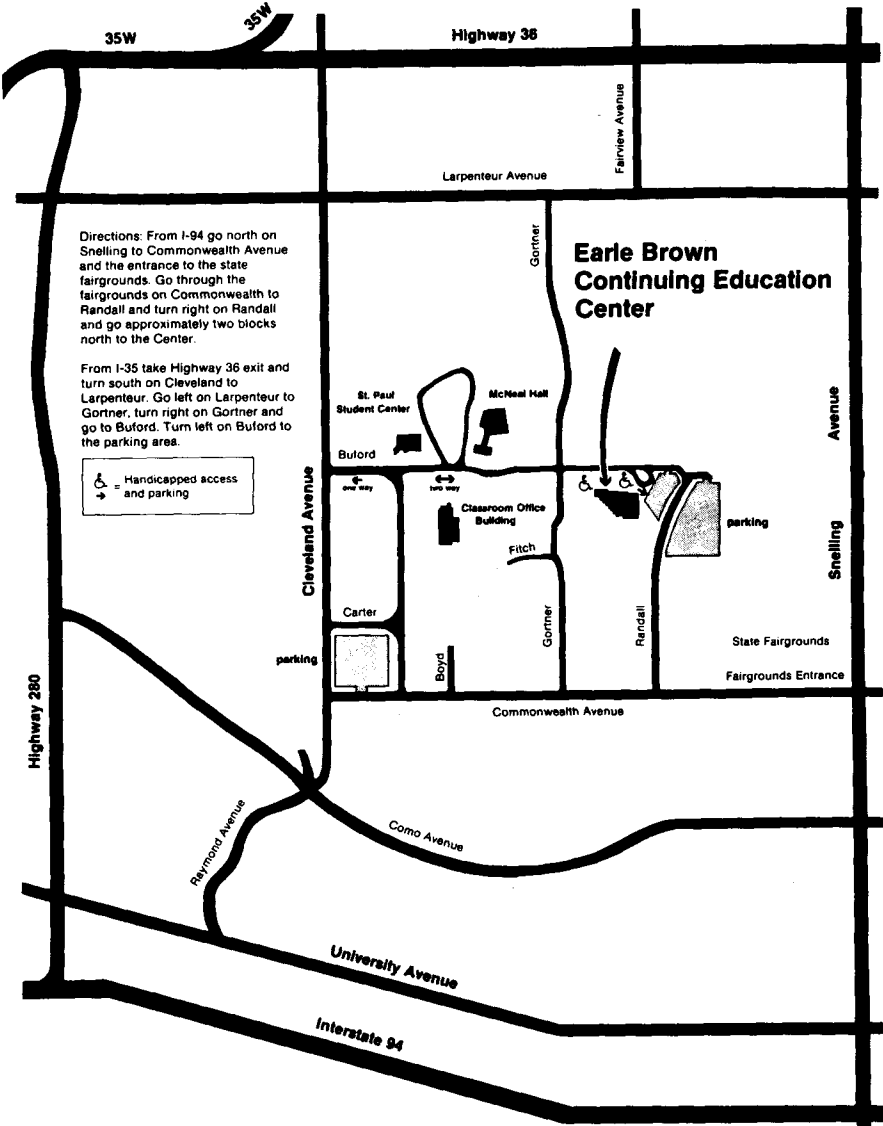
TO THE OFFICE
INTERNATIONAL
EDUCATION

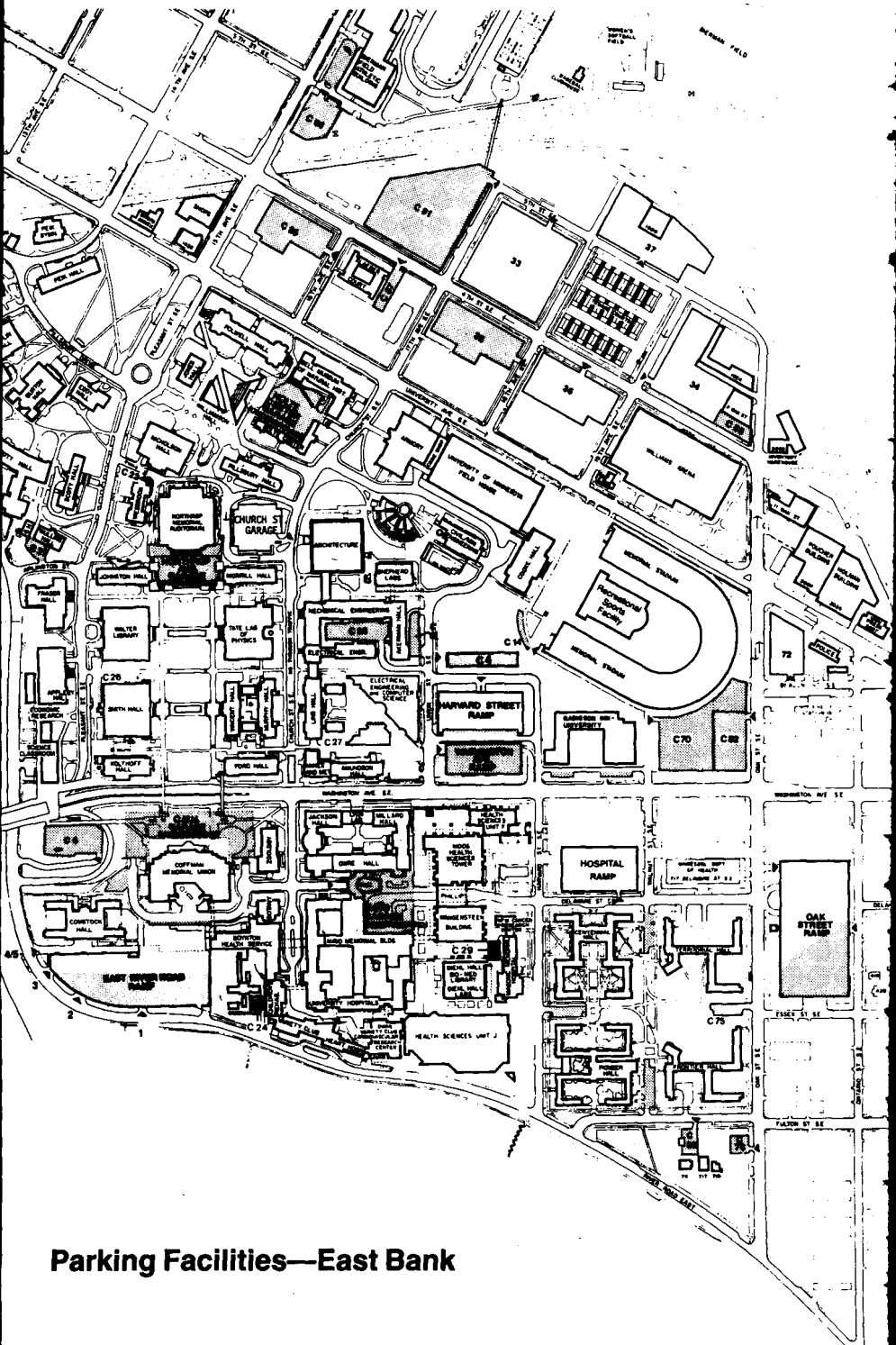
UNIVERSITY OF MINNESOTA TWIN CITIES CAMPUS WEST BANK



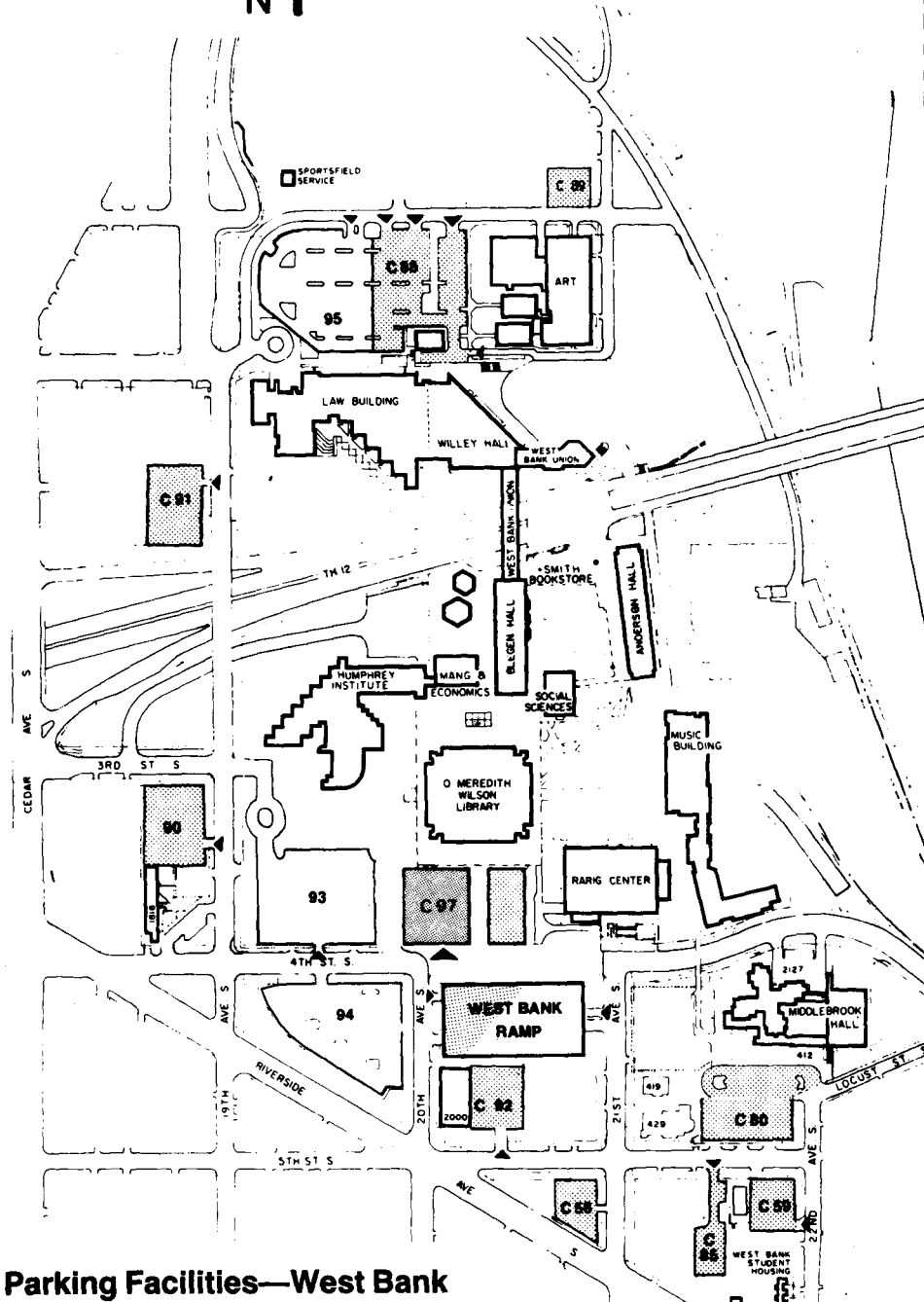
ACCESS ROUTES TO EARLE BROWN CONTINUING EDUCATION CENTER—ST. PAUL CAMPUS

Parking Map





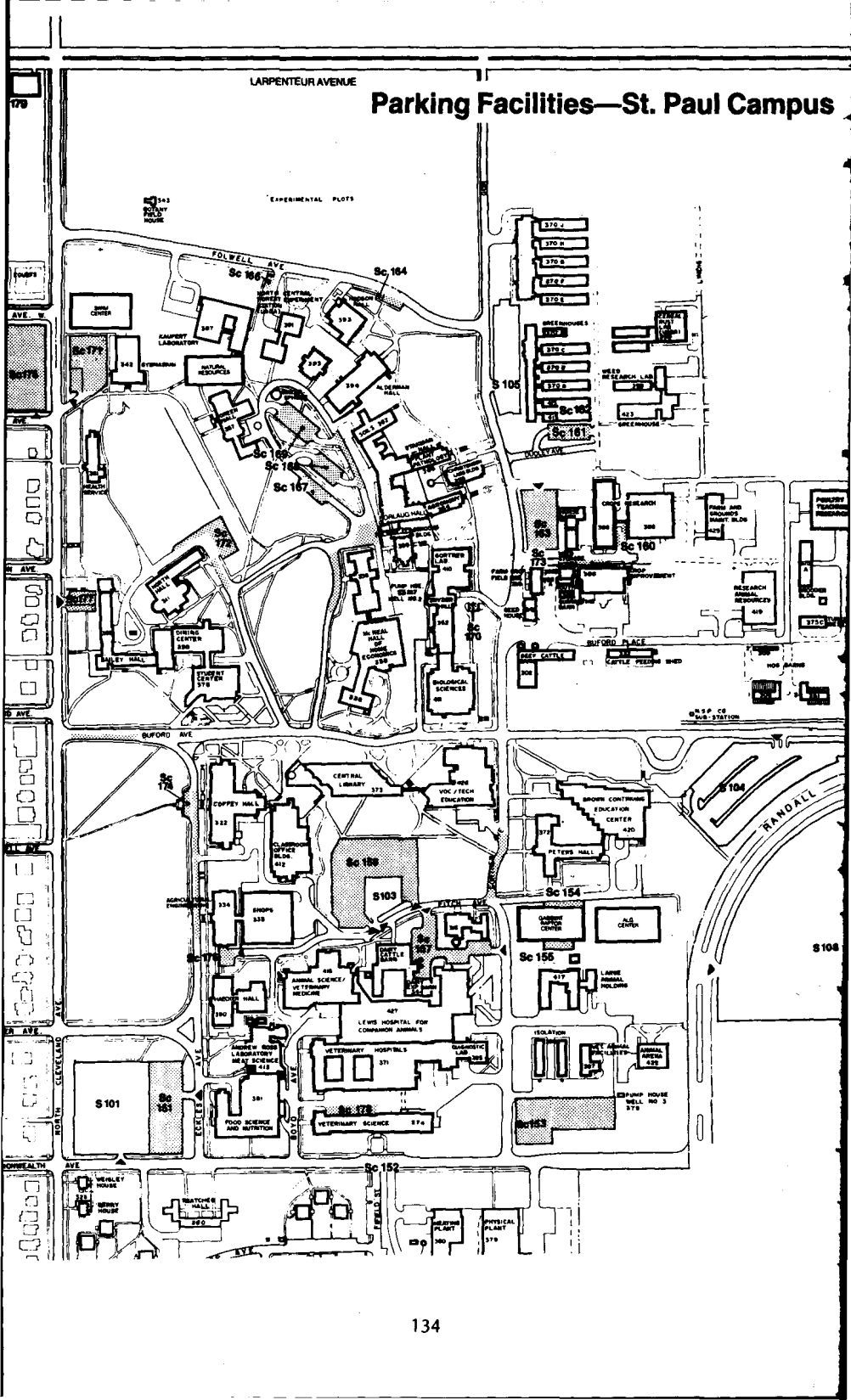
Parking Facilities—East Bank



Parking Facilities—West Bank

LARPENTEUR AVENUE

Parking Facilities—St. Paul Campus



University of Minnesota

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NOTES

Calendar

1990

APRIL

S	M	T	W	T	F	S
1	2	3	4	5	6	7
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23	24	25	26	27	28	29
30						



The Global Campus

Explore world class learning through a University of Minnesota Global Campus study abroad program. Programs are cosponsored by the Global Campus, Department of Extension classes, and University academic departments, offering courses in several disciplines. Language program credits may often be used to fulfill University language requirements. You need not be in a degree program to apply, although some programs have prerequisites.

French in Montpellier, France: Fall, winter, and/or spring quarters integrate intensive French language study, culture courses, and field trips with a home-stay experience. Two quarters participation (winter/spring only) is possible. Cosponsored by the Department of French and Italian.

German and Austrian Studies in Graz, Austria: Winter and/or spring quarters integrate intensive German language study, culture courses, and field trips with a home-stay experience. Two quarters participation is possible. Cosponsored by the Center for Austrian Studies and the Department of German.

Literature in London, England: Spring quarter integrates literary history and geographical and cultural perspectives into reading and study of literature and drama. Theatre internships are also available. Cosponsored by the Departments of English and Theatre Arts.

Writing in England: Summer session integrates study and work on individual creative writing projects with theatre visits and guest speakers. Cosponsored by the Department of English.

Spanish in Cuernavaca, Mexico: Fall, winter, and/or spring quarters integrate intensive Spanish language study, culture courses, and field trips with a home-stay experience. Two quarters participation is possible. Cosponsored by the Department of Spanish and Portuguese.

International Program in Toledo, Spain: Full year, fall or spring semesters, or summer session integrate Spanish language study, liberal arts courses, and field trips with an option of family-stay experience or dormitory living. Cosponsored by by Ortega y Gasset Foundation.

Quincentennial Summer Program and King Juan Carlos Fellowships for Spanish Teachers: Summer session program, designed for U.S. teachers of Spanish, focuses on the study of contemporary Spanish society and culture and integrates language study, culture courses, and the development of curricular materials for classroom use. Cosponsored by the Ortega y Gasset Foundation, and the Sociedad del Quinto Centenario.

Minnesota Studies in International Development: Fall quarter predeparture course work integrated with winter and spring quarter home stays; work, and study in one of the following Third World countries: Ecuador, India, Jamaica, Kenya, Morocco or Senegal. Cosponsored by the Office of International Education.

More program information may be obtained by calling 625-3379 or by writing to the Global Campus, 106 Nicholson Hall, 216 Pillsbury Drive S.E., Minneapolis, MN 55455.

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

Second Class Postage Paid
At Minneapolis, Minnesota

First Five-Week Term:

June 12 to July 17

Ten-Week Term:

June 12 to August 22

Second Five-Week Term:

June 19 to August 22

**Continuing Education
and Extension**

University of Minnesota



**U.S. Olympic
Festival—
July 6-15, 1990**

The University will be hosting many participants and events during the U.S. Olympic Festival this summer. At certain times, some additional traffic and parking congestion is expected. More information is included inside.

To correct your name or address on our lists, send the mailing label above to Extension Classes, University of Minnesota, 180 Wesbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455.

1990-1991

INDEPENDENT STUDY 1990-1991



wherever you are

INDEPENDENT STUDY, CONTINUING EDUCATION AND EXTENSION

About the Cover

This year's cover—which shows many of the places where students can “take” an Independent Study course—was created by Linda Frichtel. Frichtel is a Minneapolis-based artist who has won numerous awards for both her illustration and painting. In 1989 her illustrations won two CASE awards for Minnesota Magazine, merit and first awards for the Children's Home Society, and a national NUCEA award for a poster illustration for the University Film and Video Department at the University of Minnesota. Her clients include the University of Minnesota, the Minnesota Opera, the Science Museum, the Children's Home Society, and many agencies, magazines, and corporations.

Credit Card Payment Plan

You can pay for the tuition, fees, and materials for an Independent Study course by four methods—your personal check, a money order, cash (in person, only, please), or your Visa or MasterCard. Complete details on how to use Visa or MasterCard to pay for an Independent Study course are given in the General Information Section of this bulletin. You **cannot** use your credit card to pay for a course using the Partial Payment Plan (see General Information Section).

Volume 93, Number 10

July 18, 1990

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. It is possible for degree and certificate programs to change or be discontinued. The University will make every reasonable effort to assist admitted students in completing a program.

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, veteran status, or sexual orientation. In adhering to this policy, the University abides by the Minnesota Human Rights Act, Minnesota Statute Chapter 363; by the Federal Civil Rights Act, 42 U.S.C. 20000e; 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 USC 2012, the Vietnam Era Veterans Readjustment Assistance Act of 1972, as amended; and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be directed to Patricia A. Mullen, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, 100 Church Street SE, University of Minnesota, Minneapolis, Minnesota 55455, (612) 624-9547; to the Director of the Office of Civil Rights, Department of Education, Washington, D.C. 20202; or to the Director of the Office of Federal Contract Compliance Programs, Department of Labor, Washington, D.C. 20210.

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If you have questions about registering, courses, texts, etc., call Independent Study at the number below.

For degree and certificate program advising, please call the Extension Counseling Office:

612-624-0000

612-625-2500

A Message from the President

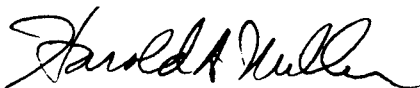
The University of Minnesota offers hundreds of academic programs. Unique among them is that provided by the Department of Independent Study. The program affords special opportunities to students of all ages and backgrounds, of all interests and geographic locations, to participate in the design and determination of their educational pursuits. It is self-directed and self-paced study. At the same time, it retains the academic rigor and quality that have long characterized educational activities at the University of Minnesota. I encourage anyone who is interested in a different but nevertheless challenging approach to lifelong learning to consider the Independent Study program.



Nils Hasselmo
President
University of Minnesota

A Message from the Dean

People who elect to continue their education by Independent Study know what they want out of their educational experience. They are self-motivated enough to keep going with no study schedules but the ones they set for themselves. They are mature enough to work independently, with their instructor's guidance, on what interests them most. We're proud of our Independent Study students, and I hope you will join them as students at the University of Minnesota.



Harold A. Miller
Dean
Continuing Education and Extension

Highlights

New Registration Form

This year Independent Study is using a new registration form. This form closely parallels the computer screen where your registration will be entered. To ensure that your registration **can be completed**, you must fill out all the spaces on the form. When you fill out the form, be sure to enter the Department of Independent Study (DIS) course number (given in parentheses following the course title in the Course Descriptions section of this bulletin) and your University student ID number (if you have one), and to sign the form. Also fill out the back of the form. The ethnic information is required for federal reporting purposes and the other information will help us learn more about our students and what types of courses they want and need. Only one check mark is required per box.

Minimum Course Completion Time

To ensure that students have a satisfactory learning experience, a minimum of **six weeks** is required to complete an Independent Study course. The six weeks begins the date the first lesson assignment is submitted, not the date of registration. No course grade will be sent to the Office of the Registrar in fewer than six weeks from the date when the first lesson assignment was submitted. Also, students may send in a maximum of **two lesson assignments** per week. An exam is counted as a lesson assignment under this policy. This means that if you submit two lesson assignments in one week (7 calendar days), you **cannot** also take an exam for the same course during that same week.

New Refund Policy

Part of your tuition can be refunded if you cancel within 90 days of the date of registration and if you have **not** completed more than half of the lesson assignments in the course. The cost of the study guide is not refundable. The refund schedule (percent of tuition refunded) is given in the General Information section under Grades.

Incompletes, Cancellations, Withdrawals

You have one year to complete most courses listed in this bulletin. If you cannot complete a course in one year, you can write and ask to reinstate for an additional year (\$25 fee). Then a grade of I will appear on your transcript (it will be changed to a letter grade when you finish the course). If you do not reinstate, a grade of F or N will be placed on your transcript. If you ask to cancel your course registration within six weeks of the date you registered, that course will not appear on your transcript and you may receive a partial refund of tuition. You have six months from the date you registered to officially cancel your registration with a grade of W on your transcript. See General Information, Grades, for more information on these policy changes.

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Campus
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Independent Study, Deborah Hillengass, 33 Wesbrook Hall
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Social Sciences, Humanities, Art, and Education
Health and Human Services (Nursing, Social Work, and Pharmacy)
Government and Public Affairs
Business, Industry, and Management
Rochester Continuing Education Center, Carol Lund, 1200 South Broadway, Rochester
Summer Session, Jack Johnson, 135 Johnston Hall
University Film and Video, Judith A. Gaston, 1313 SE 5th St., Suite 108
University Media Resources, Sheldon Goldstein, 540C Rarig Center

Administrative Support Services

Communication Services, Gayle Hendrickson, Director
Development Office, Lynne Hansen
Office of Information Systems, Barbara Merrill, Director
Staff Development, Kathleen Berwick, Coordinator

A Bulletin User's Guide

To make this bulletin easier to use, we've prepared the following five pages. They briefly explain how to select a course appropriate to your needs and wants, how to register, how to successfully complete a course, and your responsibilities as an Independent Study student. More detailed information about Independent Study's procedures, courses, and enrollment options is given in the rest of this bulletin, but these five pages will give you a synopsis of how you can get the most from your Independent Study experience.

Selecting a Course

In order to choose a course appropriate to your educational needs, wants, and abilities, it is important that you understand the course description format used in this bulletin.

- Courses are listed under **departmental or subject headings**, alphabetically arranged. Where other classifications are possible, cross references are given. Also refer to the index.
- The description below indicates the information that is found in all college course descriptions in this bulletin.

¹ Engl 3111 ² SURVEY OF ENGLISH LITERATURE I ³ (3657)
12 lessons—\$221—⁴ 4 degree credits—⁵ text price \$30—⁶ 1 audio cassette \$3.50—⁷ McNaron ⁸

A historical survey of the major figures, movements, and trends in English literature. This course will consider the works of Chaucer, Marvell, Spenser, Shakespeare, and Donne.

⁹

1. Department designation and course number
2. Course title
3. Department of Independent Study (DIS) reference number
4. Number of lessons
5. Tuition cost
6. Number and kind of credits offered (i.e., degree or certificate)
7. Approximate price of texts and materials
8. Instructor's last name (see Faculty list for title)
9. Course content and prerequisites, if any

- Additional information about a course can be obtained by writing to the Department of Independent Study for an introduction to the course study guide. Use the form included at the end of this bulletin. Study guides are also available for inspection at the Independent Study office.

- The University uses the following college course numbering system.

0001 to 0998	Noncredit or certificate courses; certificate credit course numbers are followed by a "C"
1000 to 1998	Introductory courses primarily for freshmen and sophomores
3000 to 3998	Intermediate courses primarily for juniors and seniors; also open to other students with at least a C average and necessary prerequisites
5000 to 5998	Advanced courses for juniors, seniors, and graduate students (credits earned through Independent Study, except for specified broadcast television and other courses, are not accepted as graduate credit in the University of Minnesota Graduate School)

- Generally, 3000- and 5000-level courses are more difficult than 1000-level courses. However, you may register in any course you believe you can successfully complete and for which you meet the prerequisites. If you have any questions about course difficulty, contact the instructor (in care of the Department of Independent Study) or the Extension Counseling Office.

- If you need or want a course not listed in this bulletin, it may be available from one of the other member institutions of the National University Continuing Education Association (N.U.C.E.A.). The N.U.C.E.A.'s **Independent Study Catalog** lists the courses that are offered by these institutions. It is available from Peterson's Guides, N.U.C.E.A. Book Order Department, Box 2123, Princeton, NJ 08543-2123. Write to Peterson's Guides for the cost.



Registering

To Register

- You can register for most Independent Study courses at any time.
- Using the Course Descriptions section or the high school section, select the course or courses you want to register in.
- Complete the registration form at the center of this bulletin.
- Mail or bring in your completed registration form with full or partial-payment tuition (including any special fees) to:
Department of Independent Study
45 Wesbrook Hall
77 Pleasant St. SE
University of Minnesota
Minneapolis, MN 55455
Make your check or money order payable to the University of Minnesota, or fill out the Credit Card Payment section on the registration form.
- If you are registering for a Home Video course, indicate this on the registration form and include the \$20 nonrefundable rental fee.
- If you are registering under the G.I. Bill, please indicate this when you register.
- You are encouraged to send one check for tuition and books (approximate book prices are given with the course description). Indicate that you are including payment for texts and add a \$4 service charge per course. Overpayments of \$1 or more will be refunded.

After You Register

- After you register, you will receive a comprehensive study guide, lesson submission forms, and mailing labels.
- If you choose to purchase your texts after you receive your study guide, you should obtain them as soon as possible from your local library, bookstore, or the Minnesota Book Center on the Minneapolis campus of the University. You may also order texts by mail through the Department of Independent Study by completing and sending in the order form included with your study guide along with your check or money order. There is a \$4 service charge per course for ordering texts by mail.
- Students who have not received a fee statement three weeks after mailing in registration and tuition should call 612/624-0000.

Completing an Independent Study Course

- The study guide tells you how to proceed in a course. Read the study guide introduction carefully to understand the course format and study procedures.
- Most Independent Study courses require you to prepare lesson assignments based on required readings (in the texts and study notes). The average time required to complete a lesson assignment is between six and ten hours. Lesson assignments are submitted to the Department of Independent Study, evaluated by the instructor, and returned to you. Do **not** send lesson assignments directly to your instructor.
- A minimum of six weeks is required to complete a course. The six weeks begins when the first lesson assignment is submitted, not the date of registration.
- Students may submit a maximum of two lesson assignments per week.
- You should wait until one lesson assignment has been returned before submitting another. By doing this, you may consider any comments from your instructor and recognize your mistakes and strengths.
- Most Independent Study courses require you to take midcourse and final exams. All preceding lesson assignments must be completed and graded before you take an exam. Specific exam information is given in the course study guide.
- Exams may be taken at the offices of Independent Study or under the supervision of an acceptable proctor.
- It is best to set a study schedule and submit lesson assignments on a regular basis.
- Expect to spend a minimum of three months to complete an Independent Study course (excluding grade recording).

Your Responsibilities

You are responsible for all rules and information given in this bulletin. The most significant rules are listed here; also see the General Information section or high school section.

- You must assume full responsibility for enrolling in courses appropriate to your needs and educational level.
- Some colleges and universities set restrictions governing the acceptance of Independent Study credits. Contact your college or department office before enrolling in a course if you plan to apply it to a specific program. If you have any

questions concerning the applicability of credits, contact:

Extension Counseling
314 Nolte Center
315 Pillsbury Drive SE
University of Minnesota
Minneapolis, MN 55455
Telephone: (612) 625-2500

- To earn credit in a course, you must complete all required lesson assignments and exams in the sequence given in the study guide.
- You are responsible for meeting grade recording deadlines. Allow at least three weeks after course completion for your final grade to be officially recorded. Check with Independent Study before enrolling if you have deadlines.
- The University of Minnesota Graduate School does not permit Independent Study credits (except **specified** broadcast television and other courses) to be applied toward a master's degree or doctorate. Home Video courses do **not** carry graduate credit. Independent Study credits may be applied toward the graduate language requirement or used as prerequisites, however. See University Degree Programs section, Graduate School.
- You have one year from the date of registration to complete **most** Independent Study courses. Reinstatements (renewals) of one year are permitted; see General Information section, Grades.
- If requested within 90 days of registration, transfers from one course to another are permitted. There is a service charge for this privilege. You must complete your course within a year from the date of your original registration. No transfers are permitted after 90 days and after half of the lesson assignments have been completed. Transfers involving a Home Video course are **not** permitted. See General Information section, Transferring to Another Course.
- You must assume full responsibility for completing your course or canceling/withdrawing from it. See the General Information section, Grades, for the policies concerning Incompletes, Withdrawals, Cancellations, and Refunds.

Course Descriptions

Accounting (Management)

Also see Business Studies

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

Acct 1024 PRINCIPLES OF FINANCIAL ACCOUNTING I (1531)

16 lessons—\$159.75—3 degree credits—text price \$66—Heslop
Recording, reporting, and interpreting business events. Use of accounting as a tool of business management. Topics: financial statements; journal, ledger, and trial balance; adjusting process; receivables, payables, and interest; merchandise inventory; plant assets and intangibles. Must be taken A-F.

Acct 1025 PRINCIPLES OF FINANCIAL ACCOUNTING II (1525)

16 lessons—\$159.75—3 degree credits—text price \$59—Heslop
Continuation of Acct 1024. Topics: control over cash; bank reconciliation; petty cash; voucher system, payroll records; partnership accounting; corporation accounting; manufacturing statements; process cost systems; job order cost systems; fund statement; cash-flow statement and financial statement analysis. Must be taken A-F. (Prerequisite: Acct 1024 or introductory college accounting course)

Acct 1051 MANAGERIAL ACCOUNTING (1530)

16 lessons—\$213—4 degree credits—text price \$45—Heslop
Accounting analysis and reports for managerial decisions. Information for planning and controlling of operations. Must be taken A-F. (Prerequisites: Acct 1025 and at least 90 credits completed or in progress)

Acct 5135 INCOME TAX ACCOUNTING (1584)

16 lessons—\$245—4 degree credits—text price \$54—Lassila
The more common and important provisions of the federal income tax system as applied to individuals and corporations. Begins with a consideration of which types of income are taxable and which are not. Consideration is then given to gains and losses, dividends, and deductions. Covers recent tax laws, including those enacted in 1986, 1987, and 1988. Must be taken A-F. (Prerequisite: Acct 1025 or Acct 1050 or equivalent and at least 90 credits taken or in progress)

Adolescent Psychology

See Child Psychology

Afro-American and African Studies (CLA)

Afro 3601 INTRODUCTION TO AFRICAN LITERATURE (K376)

11 lessons—\$221 (plus texts)—4 degree credits—study guide \$10—Pike
A survey of 19th and 20th century African literature, including oral narratives, written poetry, short stories, novels, and plays. All readings in English. **This course will be broadcast Fall 1990 on KUOM radio, 770 AM (see the blue section).**

Course Descriptions

Afro 3601 INTRODUCTION TO AFRICAN LITERATURE (A376)

Audio Cassette Course—\$221 (plus texts)—4 degree credits—study guide \$10—10 audio cassettes \$24.75—Pike

See above. Available January 1991.

Afro 5597 HARLEM RENAISSANCE: AFRO-AMERICAN ART AND CULTURE IN THE 1920S (3620)

8 lessons—\$221 (plus texts)—4 degree credits—Wright

Multidisciplinary review of the Jazz Age's Harlem Renaissance—literature, popular culture, visual arts, political journalism, and such people as Jean Toomer, Claude McKay, Langston Hughes, Bessie Smith, DuBose Heyward, Carl Van Vechten, Eugene O'Neill, Marcus Garvey. **This course is now in preparation; please inquire before enrolling.**

Agricultural Economics (Agriculture)

AgEc 1400 AGRICULTURAL MARKETS AND PRICES (1082)

15 lessons—\$213—4 degree credits—text price \$46—Crooks

Agricultural markets and marketing systems; food consumption and demand; agricultural production and supply; market prices; marketing margins; markets over space and time; quality differences and grades for farm products; market information; market structure analysis; marketing and pricing institutions; market and price policy; and marketing pricing and economic development. (Prerequisite: Econ 1002 or equivalent)

Agriculture

See Animal Science; Entomology; Food Science and Nutrition; Horticultural Science

American Studies (CLA)

AmSt 1920 TOPICS IN AMERICAN STUDIES: ELLERY QUEEN AND THE AMERICAN DETECTIVE STORY (A141)

Audio Cassette Course—\$213—4 degree credits—text price \$23—10 audio cassettes \$24.75—study guide \$10—Cox

Examines some of the reasons for the popularity of Ellery Queen—author, detective-hero, scholar, editor, and critic. This versatile gentleman represents much of the history and style of the American detective story. Novels and stories from the four "periods" of the Queen canon, as well as other representative American writers, will be assigned for reading and discussion.

AmSt 3920/5920 TOPICS IN AMERICAN STUDIES: THE MEANINGS OF PLACE (T143/T143.1)

10 lessons—\$221—4 degree credits—text price \$57—study guide \$20—Clemence and Martin

This course provides direct experiences in analyzing the cultural and psychological messages of our surroundings. With guidance from a cultural historian and a landscape architect, students will observe and explore various settings to discover what present day environments can reveal about the past and to gain a better understanding of the connections between sense of place and feelings of well-being. Places picked for analysis include the Minneapolis and St. Paul central districts, selected Twin Cities neighborhoods, village and small town settings inside and outside Minnesota, and various landscapes of the open countryside. **Students may receive credit for only one of the following: AmSt 3920, AmSt 5920, or Arch 5956. This course will be broadcast Spring 1991 on KTCI-TV (Channel 17) and KWCM-TV (Channel 10) (see the blue section).**

AmSt 3920/5920 TOPICS IN AMERICAN STUDIES: THE MEANINGS OF PLACE (V143/V143.1)

Video Cassette Course—\$221—4 degree credits—text price \$57—study guide \$20—Clemence

See above. **Students view the cassettes at Walter Library, Duluth Center, the Morris Learning Center, or on their Home VCR (see the blue section).**

AmSt 3970 DIRECTED STUDY: AMERICAN ARCHITECTURE TO 1860 (1408)

13 lessons—\$221—4 degree credits—text price \$56—Roberts

Selective examination of building forms and patterns in America, with attention to Old World antecedents and their vernacular expressions during the pre-Revolutionary period. The scope of this course extends into the mid-19th century, covering the birth of a national style (architecture as politics). Also available as Arch 3970.

Course Descriptions

Animal Science (Agriculture)

AnSc 1600 HORSE PRODUCTION (1041)

13 lessons—\$213—4 degree credits—text price \$35—Jordan
Breeds and selection, inheritance and reproduction, nutrition and management of the weanling, mare, and stallion; farriery, tack and equipment, diseases and health; and stable management.

Anthropology (CLA)

Anth 1101 HUMAN ORIGINS (1103)

4 lessons—\$266.25—5 degree credits—text price \$57—Spector
World prehistory as investigated by archaeologists is the major topic of this course. The methods and concepts employed by archaeologists in the study of human origins and prehistoric biological and cultural development are also considered.

Anth 1102 INTRODUCTION TO SOCIAL AND CULTURAL ANTHROPOLOGY (1102)

16 lessons—\$266.25—5 degree credits—text price \$65—Contursi
Study of cultures in all parts of the world, directed toward a broad understanding of how people view their world, cope with their environments, and organize their lives.

Anth 1102 INTRODUCTION TO SOCIAL AND CULTURAL ANTHROPOLOGY (V112)

Video Cassette Course—\$266.25—5 degree credits—text price \$37—study guide \$20—Gerlach
An introduction to the ways in which the cross-cultural, comparative, and holistic study of contemporary societies and cultures across the world and of their social, political, economic, technological, and religious institutions can provide an understanding of human diversity, adaptation, and condition. **Students view the cassettes at Walter Library or the Morris Diversity Center.**

Anth 5141 CULTURE AND PERSONALITY (1197)

\$221—4 degree credits—text price \$43—Ingham
Examines the relation between culture and personality, with emphasis on recent work in psychoanalytic anthropology. Topics include human nature, child development, personality, mental illness, group psychodynamics, religious ritual and symbolism, and war.

Architecture (IT)

Arch 3970 DIRECTED STUDY: AMERICAN ARCHITECTURE TO 1860 (1408.1)

13 lessons—\$265—4 degree credits—text price \$56—Roberts
See AmSt 3970. You **cannot** take this course if you have already received credit for AmSt 3970. This course can only be used as an elective for architecture degrees.

Arch 5956 THE MEANINGS AND MESSAGES OF PLACE: CITY, TOWN, AND COUNTRYSIDE (T143.2)

10 lessons—\$265—4 degree credits—text price \$57—study guide \$20—Clemence
See AmSt 3920/5920.

Arch 5956 THE MEANINGS AND MESSAGES OF PLACE: CITY, TOWN, AND COUNTRYSIDE (V143.2)

Video Cassette Course—\$265—4 degree credits—text price \$57—study guide \$20—Clemence and Martin
See AmSt 3920/5920. **Students view the cassettes at Walter Library, Duluth Center, Morris Learning Center or on their Home VCR (see the blue section).**

Art (CLA)

ArH 1001 INTRODUCTION TO THE VISUAL ARTS (T121)

10 lessons—\$213—4 degree credits—text price \$36—study guide \$10—McNally and Podulke
Basic problems of art. Examples of painting and sculpture analyzed to illustrate the roles of art in society,

Course Descriptions

problems of design, materials and techniques, presented topically rather than chronologically. **This course will be broadcast Spring 1991 on KTCI-TV (Channel 17) (see the blue section).**

ArH 1001 INTRODUCTION TO THE VISUAL ARTS (V121)

Video Cassette Course—\$213—4 degree credits—text price \$36—study guide \$10—McNally and Podulke

See above. **Students view the cassettes at Walter Library or the Morris Learning Center.**

Astronomy (GC)

GC 1161 PHYSICAL SCIENCE: SOLAR SYSTEM ASTRONOMY (1314)

15 lessons—\$266.25—5 degree credits—text price \$41—Policoff

An introductory survey of the solar system, including a study of the earth, planets, satellites, asteroids, comets, and meteorites. Topics include the celestial sphere, coordinate systems, time intervals, motions and physical attributes of planets and their satellites in the solar system, and instruments used by the astronomer. Observations of the night sky included. Elementary algebra suggested.

GC 1162 PHYSICAL SCIENCE: STELLAR ASTRONOMY (1315)

16 lessons—\$266.25—5 degree credits—text price \$42—Policoff

An introductory survey of the large scale structures of the universe, including the definition of certain properties of stars (magnitude, luminosity, brightness). Topics: the sun, the spectral classification of stars, white dwarfs, neutron stars, black holes, clusters, nebulae, galaxies, quasars, cosmology, and cogmogony. Observation of the night sky included. Knowledge of elementary algebra helpful. **This course is now in preparation; please inquire before enrolling.**

Beekeeping

See Entomology

Biology (Biological Sciences)

Biol 1009 GENERAL BIOLOGY (1601)

15 lessons—\$266.25—5 degree credits—text price \$47—lab kit \$30—Brooker

An introduction to the general principles of biology. Topics include the cell, metabolism, heredity, reproduction, ecology, and evolution. Simple laboratory exercises are performed.

Business

See the following departmental listings for course offerings:

Accounting

Business, Government and Society

Business Law

Business Studies

Educational Policy and Administration ("Personal Time Management")

Industrial Relations

Information and Decision Sciences

Management

Marketing

Textiles and Clothing

Course Descriptions

Business, Government and Society (Management)

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

BGS 3002 BUSINESS AND SOCIETY (1594)

12 lessons—\$245 (plus texts)—4 degree credits—Weber

Basic economic and social goals, and various attempts to meet them. Emphasis on American society. Business as an institution; its relationships to other institutions and society. Ethical and practical conflicts in the role of the firm and the manager examined in the context of the public policy process. Current social issues and their impact on business. **This course is now in preparation; please inquire before enrolling.**

BGS 3004 INTERNATIONAL BUSINESS (1591)

12 lessons—\$245—4 degree credits—text price \$44—Holloway

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 host nations. Must be taken A-F. (Prerequisite: at least 90 credits completed or in progress)

BGS 3005 GOVERNMENT AND BUSINESS (1589)

14 lessons—\$245—4 degree credits—text price \$58—B. Erickson

Topics covered in this course include the role of the free enterprise system, structure of American industry, economic and social consequences of big business, public policies toward private enterprise, public regulation, public ownership, and antitrust laws and their applications. Social regulations of business, such as EEO, consumer, and occupational safety and health laws, are also covered. (Prerequisite: Econ 1001 and 1002 or equivalent) **Students may not receive credit for both BGS 3005 and Econ 3651.**

Business Law (Management)

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

BLaw 3058 INTRODUCTION TO LAW, AND THE LAW OF CONTRACTS AND SALES CONTRACTS (1859)

13 lessons—\$245—4 degree credits—text price \$69—Hower

Study of the origin of law, its place in and affect upon society; the history and development of law; the systems of courts; and legal procedure. An extensive study of the law of contracts as the basic law affecting business transactions; and law affecting the sales of goods contracts. Must be taken A-F. (Prerequisites: Econ 1101 or equivalent and at least 90 credits completed or in progress) **Students may not receive credit for both BLaw 3058 and GC 1534.**

BLaw 3078 AGENCY, PARTNERSHIPS, CORPORATIONS, AND COMMERCIAL PAPER (1860)

11 lessons—\$245—4 degree credits—text price \$69—Hower

A study of law affecting the relationship between principal and agent, master and servant, and employer and employee. Topics: partnership and corporate forms of business entities (including the methods of creating the relationships), the law developed to regulate and control these organizations and their members, and contracts referred to as commercial papers (negotiable instruments), with emphasis on effect of the Uniform Commercial Code. (Prerequisite: BLaw 3058 or GC 1534 and at least 90 credits completed or in progress)

BLaw 3088 LAW OF PERSONAL PROPERTY, REAL PROPERTY, WILLS AND ESTATES (1861)

14 lessons—\$245—4 degree credits—text price \$69—Hower

Study of the basic concepts of personal property, including rights of possessors, bailee, finders and holders of security interests. Also includes study of the basic concepts and principles of real property law; transfers of ownership, control of and encumbering such interests. Concludes with a brief study of the law of wills and estates in passing rights to property in event of death. (Prerequisite: BLaw 3058 and at least 90 credits completed or in progress)

Course Descriptions

Business Studies (GC)

GC 1235 UNITED STATES: LAW IN SOCIETY (1615)

13 lessons—\$213—4 degree credits—text price \$46—Hower

In order to give students an appreciation of the role of law in our changing society, the legal aspects of current topics are discussed. Topics include: court and court systems; grand and petit juries; corrections; welfare and domestic problems; consumer issues including insurance (no-fault auto and life); wills and probate procedures. A civil law suit, from beginning to end, is explained. Each student is required to complete a project paper. This course is a prerequisite for Legal Studies courses.

GC 1511 INTRODUCTION TO MODERN BUSINESS (1625)

18 lessons—\$266.25—5 degree credits—text price \$39—Hower

Intended for both business and general education; provides an overview of economic environment in which business operates. Major functions of a business organization are surveyed, including production, finance, personnel, and marketing. A useful introductory course for students planning to do more work in business, but also recommended for those who only want to survey the field.

GC 1513 PRINCIPLES OF SMALL BUSINESS OPERATIONS (1628)

14 lessons—\$266.25—5 degree credits—text price \$59—Kroll

The importance of small business in the United States, and the challenges, pitfalls, and procedures related to starting and operating a small business. Emphasis on strategic planning, internal analysis of potential firm's strengths and weaknesses versus the competition, and writing a business plan. Functional components include accounting and finance, marketing and management. Distinct assignments for students who only want to learn about small business and for those who plan to actually start their own small business.

GC 1534 PRACTICAL LAW (1620)

15 lessons—\$213—4 degree credits—text price \$80—Hower

Designed to acquaint students with common legal problems. Topics include: definition and sources of law; formation and discharge of contracts; torts (personal injury and property damage suits); criminal law; bailments; nature and classification of real and personal property; joint ownership and tenancy. This course is a prerequisite for Legal Studies courses. **Students may not receive credit for both GC 1534 and BLaw 3058.**

GC 1540 ACCOUNTING FUNDAMENTALS I (1527)

13 lessons—\$213—4 degree credits—text price \$67—R. Larson

The first of a two-part introductory course in college accounting, which is designed for both business and nonbusiness students. Starts with a study of balance sheet and income statement methodology, continues through the accounting cycle for both service and merchandising businesses, and concludes with an examination of special journals, inventories, receivables, and accounting for plant assets.

GC 1542 ACCOUNTING FUNDAMENTALS II (1528)

13 lessons—\$213—text price \$83—4 degree credits—R. Larson

Continues GC 1540 accounting sequence. Topics include handling dividends, retained earnings and treasury stock, debt, investments, financial reporting, and sources and uses of working capital. Also examines financial statements, accounting for manufacturing operations, and cost analysis problems. (Prerequisite: GC 1540)

GC 1551 MARKETING: INTRODUCTION (1622)

13 lessons—\$266.25—5 degree credits—text price \$34—Peterson

Emphasis on application of the fundamentals of marketing. Topics include target markets, segmentation analysis, marketing mix, and strategic marketing.

GC 1553 MARKETING: PRINCIPLES OF MANAGEMENT (1623)

13 lessons—\$266.25—5 degree credits—text price \$43—Peterson

Emphasis on application of the principles of management. Specific topics include planning, organizing, directing, controlling, decision-making, leadership, and group dynamics.

Course Descriptions

GC 3560 PERSONNEL ADMINISTRATION (1626)

12 lessons—\$221—4 degree credits—text price \$42—Kroll

An applied practical course in personnel practices. It includes human resource planning, Equal Employment Opportunity regulations, staffing, employee development, performance evaluation, and reward systems and methods. Through readings, brief exercises, and in-depth cases, students get a comprehensive first-time exposure to personnel department practices.

GC 3583 LEGAL STUDIES: ESTATE PLANNING (1627)

15 lessons—\$221—4 degree credits—text price \$49—Howe

Problems associated with planning for efficient use of financial resources during the working life and after the death of an income provider. Forms of property ownership, fact gathering for devices used in estate planning (wills and trusts), and the drafting of these devices, and administering a decedent's estate, are discussed.

GC 3602 APPLIED SUPERVISION (1624)

13 lessons—\$221—4 degree credits—text price \$45—Kroll

Practical, applied approach to first-level and intermediate-level management. Through readings, short exercises, and in-depth cases, students learn basic management principles and practices—leading, delegating, problem solving, influencing motivation and productivity, and planning organizing and controlling functions. The course fits the needs of students interested in either profit-oriented or nonprofit organizations. (Prerequisite: 75 credits; one course in basic composition; introductory psychology and sociology courses helpful but not required)

Business Writing

See Composition

Chemistry (GC)

GC 1166 PHYSICAL SCIENCE: PRINCIPLES OF CHEMISTRY (7725)

14 lessons—\$266.25—5 degree credits—text price \$35—Uthe

Fundamental principles and laws of chemistry, stressing the development and application of theories and their roots in experience. Problem-solving techniques applied to chemistry. Topics include classification of matter, elements, atomic and molecular structure, compounds and chemical bonding, mole calculations, percent composition and empirical formulas, chemical equations, reactions, and stoichiometry, solutions and solution concentrations, acids and bases, gases and gas laws, organic chemistry, and others. Students gain general understanding of both the content and process of the science of chemistry. (Prerequisite: basic background in elementary algebra)

Child Psychology (Education and GC)

Also see Psychology

CPsy 1301 INTRODUCTORY CHILD PSYCHOLOGY (8283)

13 lessons—\$213—4 degree credits—text price \$43—Dickson

Designed to provide an understanding of children and their development, the methods used by child psychologists, and the critical evaluation of research. Topics include: personality and social behavior, biological bases and cognitive development, and the work of Jean Piaget. (Prerequisite: 5 credits introductory psychology).

CPsy 3302 INFANCY (8285)

10 lessons—\$265—4 degree credits—text price \$32—Glicksman

Perceptual, motor, emotional, social, and cognitive development during the first two years of life; the developing infant in his or her social and physical environment. (Prerequisite: CPsy 1301 or consent of instructor)

CPsy 3304 INTRODUCTION TO MATURITY AND AGING (8284)

13 lessons—\$265—4 degree credits—text price \$42—Nussli

Exploration of practical and theoretical issues in the psychology of maturity and aging. Also, a review of developmental changes in perceptual-motor, cognitive, and social behavior from young adulthood to old age. (Prerequisite: CPsy 1301)

Course Descriptions

CPsy 5303 ADOLESCENT PSYCHOLOGY (8282)

14 lessons—\$265—4 degree credits—text price \$54—Dickison

Survey of the behavior and psychological development of the adolescent including: biological considerations, cognition and creativity, moral development, parent-child relations, peers, ego identity, sexual development, school adjustment, social-cultural considerations, and the adolescent subculture. (Prerequisite: 5 credits introductory psychology)

CPsy 5331 PROCESSES OF SOCIAL DEVELOPMENT (8287)

10 lessons—\$265—4 degree credits—text price \$51—Collins

Processes of individual change from infancy through adolescence and development of capacities for and influences of social relations; research, methodology, and theoretical perspectives. (Prerequisite: CPsy 1301 or equivalent)

GC 1284 BEHAVIOR PROBLEMS OF CHILDREN (8286)

12 lessons—\$213—4 degree credits—Latts

This course deals with the identification of maladaptive behavior in children, and suggests ways of coping with children demonstrating such behavior. The focus is the child at home, at school, and in social relationships. The course examines the effects of heredity, family experience, peer pressure, and socio-economic class on the development of behavior problems in children. **This course is now in preparation; please inquire before enrolling.**

Chinese

See East Asian Studies

Civil Engineering (IT)

CE 0302 CONCRETE AND CONCRETE MATERIALS (2896)

16 lessons—\$159.75—3 certificate credits—text price \$69—Skok

Includes a study of materials from which concrete is made, methods of designing a concrete mixture, the principles of air-entrained concrete, methods of measuring and controlling the air content, the chemical constitution of cement, properties of concrete, the practical aspects of proportioning, mixing, placing, and curing concrete and related topics. (Prerequisite: Basic knowledge of algebra, physics, and chemistry)

Classics (CLA)

Clas 1019 MAGIC, WITCHCRAFT, AND THE OCCULT IN GREECE AND ROME (A524)

Audio Cassette Course—\$213—4 degree credits—text price \$30—study guide \$10—10 audio cassettes \$24.75—G. Erickson

Magic and witchcraft in classical literature and mythology, the practice of magic as observed from papyri, epigraphical and literary evidence, and beliefs and practices concerning prophecy and the interpretation of dreams are considered. The course also explores the changing role of witchcraft and divine possession from early to later antiquity, and the relation of these phenomena to changes in economic and social conditions.

Clas 1048 GREEK AND LATIN TERMINOLOGY IN THE MEDICAL AND BIOLOGICAL SCIENCES, AND THE HUMANITIES (5248)

16 lessons—\$106.50—2 degree credits—no required texts—K. Baldwin

Presentation in English contexts of Greek and Latin prefixes, suffixes, and root words in modern technical vocabularies; special attention to medical terminology. No previous study of Greek or Latin required. (Prerequisite: Clas 1045 or 3045 or concurrent registration in Clas 1045 or 3045)

Clas 3970 DIRECTED STUDIES: ROMAN REALITIES: LIFE AND THOUGHT IN THE ROMAN EMPIRE (5247)

11 lessons—\$221—4 degree credits—text price \$64—G. Erickson

The eruption of Vesuvius buried and preserved the Italian cities of Pompeii and Herculaneum so quickly and completely that excavations now enable us to construct a vivid picture of life at that time. Using this evidence and other research, this course focuses on social history through the study of art, archeology, literature, dream interpretation, medical writing, and magic.

Course Descriptions

Class 3970 DIRECTED STUDIES: ROMAN REALITIES: LIFE AND THOUGHT IN THE ROMAN EMPIRE (A523)

Audio Cassette Course—\$221—4 degree credits—text price \$64—study guide \$10—10 audio cassettes \$24.75—G. Erickson

See above.

Class 3970 DIRECTED STUDIES: ROMAN REALITIES: LIFE AND THOUGHT IN THE ROMAN EMPIRE (K523)

11 lessons—\$221—4 degree credits—text price \$64—study guide \$10—G. Erickson

See above. **This course will be broadcast Winter 1991 on KUMD radio, 103.3 FM (see the blue section).**

Class 5004 EROTICISM AND FAMILY LIFE IN THE GRAECO-ROMAN WORLD (A526)

Audio Cassette Course—\$221—4 degree credits—text price \$49—study guide \$10—10 audio cassettes \$24.75—G. Erickson

Analysis of Greek and Roman family life in the shaping of personality; diachronic change in modes of erotic expression; Narcissism and homosexuality; the status and roles of women; evolving views of sexual morality in the ancient world compared to present trends. Representative views taken for analysis and discussion from art and literature. Development of early Christian attitudes toward sexuality.

Class 5005 MADNESS AND DEVIANT BEHAVIOR IN ANCIENT GREECE AND ROME (A522)

Audio Cassette Course—\$221—4 degree credits—text price \$25—15 audio cassettes \$36—study guide \$20—G. Erickson

Definitions of madness in Greece and Rome and theories of its etiology; assessment of predisposing factors in Greece and Rome; examples of madness from mythology, legend, and history; cross-cultural comparison with contemporary United States.

Communication (Duluth)

Comm 5120 WORKSHOP: PRIME TIME WOMEN (A373) (U of M Duluth)

Audio Cassette Course—\$174—3 degree credits—text price \$49—10 audio cassettes \$24.75—study guide \$10—Krug

This course examines women in the media, both the realities of working in radio and television, and the way in which they are presented on radio and television programs. See General Information section, Duluth Credits.

Comparative Literature

See English

Composition and Communication (CLA and GC)

Also see English, Creative and Professional Writing

GC 0402 GRAMMAR AND USAGE REVIEW (3505)

11 lessons—\$159.75—no credit—text price \$16—O'Connell

A step-by-step review and explanation of grammatical forms, punctuation, spelling, and vocabulary. Recommended for anyone who needs to start with English composition fundamentals, or for the student who requires a thorough review of grammar. Additional exercises provided when lessons indicate the student should do extra work. No theme or letter writing required in this course.

Comp 0011 PREPARATION FOR WRITING PRACTICE (3517)

12 lessons—\$159.75—no credit—no required text—Carr

This course is for students who need to build confidence in their writing ability. Exercises emphasize writing as a process—from generating and developing ideas, to writing clearly, to revising. S-N grading only.

Comp 1011 WRITING PRACTICE I (3543)

12 lessons—\$266.25—5 degree credits—text price \$26—Adams

Journal-based practice in solving writers' problems: developing and organizing content, analyzing audience, drafting the whole essay and its parts, and revising and editing to master the fundamentals of expository structure and style.

Course Descriptions

Comp 1031 INTRODUCTION TO TECHNICAL AND BUSINESS COMMUNICATION (V351)

Video Cassette Course—\$106.50—2 degree credits—text price \$30—study guide \$10—Ross
Introduction to the processes used to define a topic, draft, and edit texts for business, government, and technical fields. **Students view the cassettes at Walter Library or on their Home VCR (see the blue section).**

Comp 1031 INTRODUCTION TO TECHNICAL AND BUSINESS COMMUNICATION (T351)

10 lessons—\$106.50—2 degree credits—text price \$30—study guide \$10—Ross
See above. **This course will be broadcast Winter 1991 on KTCI-TV (Channel 17) (see the blue section).**

Comp 3011 WRITING ABOUT LITERATURE (3535)

10 lessons—\$221—4 degree credits—text price \$56—Carr
Developing a critical argument about literary texts (novels, poems, plays, short stories) with attention to use of secondary sources. Examination and use of different modes of explication and criticism. (Prerequisite: Writing Practice requirement)

Comp 3012 WRITING IN THE HUMANITIES (3536)

12 lessons—\$221—4 degree credits—text price \$56—Carr
The major emphasis will be writing about the kind of texts ordinarily encountered in philosophy, history, cultural anthropology, social work, and inter-disciplinary fields. Initial work will concern ways to abstract and represent complicated discussions, including those of "primary" texts and "secondary" scholarship and commentary. Topics covered will be effective analysis and argument, including the proper use and presentation of textual evidence, with attention paid to the evaluation of sources. Intended for majors in anthropology, art history, geography, history, humanities, international relations, philosophy, political science, and social work. (Prerequisite: Writing Practice requirement)

Comp 3013 WRITING FOR THE ARTS (3537)

12 lessons—\$221—4 degree credits—text price \$30—Porter
Descriptions of painting, film, music, architecture, and other types of art (other than literature) as the basis for analysis. Initial emphasis will be on developing concise and unambiguous descriptions of art objects or performances. The chief emphasis will be on how descriptions serve as the basis for more complicated writing assignments, such as formal analyses and reviews. (Prerequisite: Writing Practice requirement)

Comp 3014 WRITING IN THE SOCIAL SCIENCES (3538)

10 lessons—\$221—4 degree credits—text price \$22—Wenzek
The initial concern will be to develop strategies for expressing quantitative or statistical information in clear prose. Attention will be given to how statistical tables and summaries interact with the written text and how to develop narrative and descriptive techniques for producing case studies and histories. The course will emphasize the proper use of qualitative information and case histories in the analysis of complex situations, and how the texture of writing should change for different audiences. Intended for social science majors. (Prerequisites: the Writing Practice requirement or equivalent)

Comp 3015 WRITING ABOUT SCIENCE (3539)

12 lessons—\$221—4 degree credits—text price \$23—Hamilton
This course is designed to improve the writing ability of students interested in science, and it focuses on two kinds of writing: writing about science and writing for science (the former is general; the latter, special). The various tasks science writing involves will be discussed and practiced, as will the various forms science writing can assume. This course will also consider the writing process and what makes for rhetorical effectiveness: organization, support, clarity, cleanliness, and appropriateness for the audience. As much as possible, the course will respond to individual student needs, interests, and abilities. (Prerequisites: the Writing Practice requirement or equivalent)

Comp 3031 TECHNICAL WRITING FOR ENGINEERS (3541)

12 lessons—\$221—4 degree credits—text price \$51—E. Anderson
The course deals with the problem of writing for a multiple audience (expert, executive, and lay), the writing process itself, and ways to master apprehension about writing. It also provides information about the appropriate format for technical writing, whether instruction manual, memo, or formal report. (Prerequisites: the Writing Practice requirement or equivalent)

Course Descriptions

Comp 3032 PREPROFESSIONAL WRITING FOR BUSINESS (3542)

12 lessons—\$221—4 degree credits—text price \$62—Bergland

Focus on rhetoric, form, and style of business writing in reports, case studies, and correspondence. Practical examples. (Prerequisites: the Writing Practice requirement or equivalent)

GC 3425 WRITING FOR BUSINESS AND THE PROFESSIONS (3518)

14 lessons—\$221—4 degree credits—text price \$42—Gidmark

A course in effective business writing, emphasizing the relationship between creative writing and successful management; the course will focus on various challenging business situations, all calling for a knowledge of human needs and the ability to write complete, concise, clear, correct, and convincing business letters, memorandums, and informal reports. In writing, the student will learn to understand and use aspects of human psychology; tone; correct letter, memorandum, and report formats; and the fundamentals of grammar, punctuation, and sentence structure. (Prerequisite: 45 credits)

Computers (IT and GC)

CSci 3001 PERSPECTIVES ON COMPUTERS AND SOCIETY (1902)

11 lessons—\$265—4 degree credits—text price \$59—Slagle

The impact of computers on society—partnership or confrontation? History of development, potential for use, computer utility, benefits and potential problems, chip technology and CAD, software development and maintenance, networks, use and misuse, graphics, artificial intelligence, computer-based education, applications in the office, business, and industry. Study guide available in print, in braille, and on tape.

GC 1571 INTRODUCTION TO BASIC AND TO MICROCOMPUTERS (1975)

13 lessons—\$266.25—5 degree credits—text price (including software) \$56—Robertson

Introduction to microcomputers, applications, and elementary programming using BASIC computer language. Topics include: description of microcomputers (emphasis on IBM PC and compatibles), writing simple BASIC programs, using word processor, spreadsheet, and data base manager. Students must have access to an IBM PC or compatible or be able to come to campus to use the microcomputers in the University Computer Lab. (Prerequisite: elementary algebra)

GC 3571 COMPUTER APPROACH TO PROBLEM SOLVING (1974)

16 lessons—\$276.25—5 degree credits—text price \$23—Robertson

Students learn to use a computer as a problem solving tool by writing programs in BASIC computer language. Topics: problem solving process, writing pseudocode, elements of BASIC, output modification, subscripted variables, and file manipulation. Provides good background for further programming courses. Students must have access to a computer or be able to come to campus to use the University Computer Lab. (Prerequisite: high school algebra)

Design, Housing, and Apparel (Home Economics)

Dsgn 3572 SPECIAL TOPICS: PRINCIPLES OF ANTIQUE COLLECTING (A711)

Audio Cassette Course—\$276—4 degree credits—text price \$21—study guide \$10—10 audio cassettes \$24.75—Blade

This course is designed to increase a student's visual literacy and ability to assess quality, condition, and authenticity of antiques and collectibles. Students gain insight into the importance and meaning of objects in the material culture and the significance of collecting as a human endeavor. Also contains useful information on differentiating the various practices and procedures of the business of antique buying and selling.

Dsgn 3572 SPECIAL TOPICS: PRINCIPLES OF ANTIQUE COLLECTING (K711)

10 lessons—\$276—4 degree credits—text price \$21—study guide \$10—Blade

See above. This course will be broadcast Spring 1991 on KUOM radio, 770 AM (See the blue section).

Course Descriptions

East Asian Studies (CLA)

EAS 1032 RELIGIONS OF EAST ASIA (5521)

12 lessons—\$213—4 degree credits—text price \$52—Ditmanson

See ReIS 1032. **Students may not receive credit for both EAS 1032 and ReIS 1032.**

Chn 3165 INTRODUCTION TO CHINESE LITERATURE (5507)

14 lessons—\$221—4 degree credits—Chun-Jo Liu

Survey of major Chinese literary movements from the emergence of the early Confucian canon to the 13th century. **This course is now in preparation; please inquire before enrolling.**

Ecology and Behavioral Biology (Biological Sciences and GC)

Also see Forestry

EBB 3001 INTRODUCTION TO ECOLOGY (2011)

6 lessons—\$276—4 degree credits—text price \$46—Zabinski

A survey of the basic concepts of ecology, beginning with a consideration of how individual animals and plants interact with their environment and ending with the functioning of entire ecosystems. Subsidiary topics are evolution by natural selection and humans' impact on the natural world.

GC 3115 EVOLUTION OF LIFE ON EARTH (1602)

13 lessons—\$276.25—5 degree credits—text price \$46—Hatch

History of life on earth from the first organic molecules to humankind and human culture. Evidence for evolution. Processes that lead some groups of organisms to extinction and others to survival or further speciation.

Economics (CLA)

Also see Agricultural Economics

Econ 1101 PRINCIPLES OF MICROECONOMICS (2103)

13 lessons—\$213—4 degree credits—text price \$65—Gupta

Formerly Econ 1002. A study of the basic economic principles of pricing and resource allocation. Includes demand and supply, consumer choice, costs of production; competition, monopoly, oligopoly; determination of wages, rent, interest, profits; income distribution; farm and urban problems. **Students who have taken Econ 1002 cannot receive credit for course.**

Econ 1102 PRINCIPLES OF MACROECONOMICS (2104)

14 lessons—\$213—4 degree credits—text price \$65—Gupta

Formerly Econ 1001. Determinants of national income, national income accounting, unemployment and inflation, classical and Keynesian theories, money and banking, monetary and fiscal policy, international economic relations, and less-developed nations. **Students who have taken Econ 1001 cannot receive credit for this course.**

Econ 3102 MACROECONOMIC THEORY (2164)

16 lessons—\$221—4 degree credits—text price \$65—Gupta

Factors determining price level, amount of employment and unemployment, total spending by consumers, business investments, total savings, national income, and the effects of government spending, taxes, and monetary policy on price level, employment, output, and national income. (Prerequisite: Econ 3101 or equivalent, Math 1111 or 1131 or 1201 or equivalent)

Econ 3701/5721 MONEY AND BANKING (2168/2169)

15 lessons—\$221—4 degree credits—text price \$50—H. Smith

Money, banks, and financial intermediaries as economic institutions; the mechanics of monetary transactions; the value of money; international monetary relationships; issues relating to monetary policy. (Prerequisite for 3701: Econ 1001 or 1102, Principles of Macroeconomics, or equivalent. Prerequisite for 5721: Econ 3102 or equivalent; economics majors must register for 5721 and will not receive credit for 3701)

Education (Education)

Educational Policy and Administration

EdPA 5090 SCHOOL AND SOCIETY (2690)

11 lessons—\$198.75 (plus texts)—3 degree credits—Gamradt

Readings in social science and philosophy give the student the opportunity to integrate points of view in thinking about the role of the school in a changing American society. **This course is now in preparation; please inquire before enrolling.**

EdPA 5099 DIRECTED STUDY: INVENTING THE FUTURE—LIVING, LEARNING, AND WORKING IN THE 1990s (T265)

10 lessons—\$265—4 degree credits—study guide \$20—Harkins

This field-based course is for 1990s managers, human services and health services workers, counselors, teachers, and upper-division or graduate students in many different fields. The lessons will guide you in preparing for the 1990s as you bring your own and your organization's values and goals to the course work. Topics include 1990s trends in work, leisure, education, technology, health, spirituality, homelife, and more. **This course will be broadcast Fall 1990 on KTCI-TV (Channel 17) and KWCM-TV (Channel 10) (see the blue section).**

EdPA 5099 DIRECTED STUDY: INVENTING THE FUTURE—LIVING, LEARNING, AND WORKING IN THE 1990s (V265)

Video Cassette Course—\$265—4 degree credits—study guide \$20—Harkins

See above. **Students view the video cassettes at Walter Library or on their Home VCR (see the blue section).**

EdPA 5110 PERSONAL TIME MANAGEMENT AND EFFECTIVE ADMINISTRATION (2681)

10 lessons—\$132.50—2 degree credits—text and tapes \$90—Hoyt

This course is designed for any individual who "doesn't have enough time." It teaches practical, pragmatic approaches—using examples and samples of proven techniques—to the problems of scheduling, organizing work, delegating, setting priorities, handling interruptions and meetings, doing the distasteful and the difficult, setting up filing systems that work, and finding the time to do those things that you really want to do, but don't have the time for.

Elementary Education

Elem 5321 SECOND LANGUAGE PROGRAMS FOR YOUNG CHILDREN: LIKE CHILD'S PLAY (T266)

10 lessons—\$265 (plus texts)—4 degree credits—study guide \$20—Jorstad and Pesola

Examines current approaches to teaching second languages to young children, with emphasis on innovative curricular models. Provides information about the way young children acquire language and the effects of bilingualism on child development, and presents rationales, advantages, and pedagogical theories of various program models, from full immersion to programs that emphasize cultural understanding. The TV programs show visits to actual classrooms in action, bilingual and immigrant families, and interviews with a variety of outstanding specialists in the field. **This course will be broadcast Winter 1991 on KTCI-TV (Channel 17) and Spring 1991 on KTCI-TV (Channel 17), KWCM-TV (Channel 10), KSMQ-TV (Channel 15), and WDSE-TV (Channel 8) (see the blue section).**

Educational Psychology

EPsy 5400 WORKSHOP: COUNSELING PSYCHOLOGY: CAREER DEVELOPMENT AND PLANNING (V263)

Video Cassette Course—\$265—4 degree credits—text price \$14—study guide \$20—Hansen

This course is designed primarily for counselors, teachers, and human resource personnel who want to update their knowledge and skills in the field of career development and the career planning process. It is also appropriate for adults who want to independently study their own career development. Topics include life-span career development, the career planning process, labor market data and trends, sex-role socialization and stereotyping, career decision making, dual careers, and career change and transitions. **Students view the cassettes at Walter Library, the Duluth Center, or on their Home VCR (see the blue section).**

Course Descriptions

PEsy 5690 EDUCATION OF THE GIFTED AND TALENTED (T264)

10 lessons—\$198.75—3 degree credits—text price \$43—study guide \$10—Rogers
Origin and development of terms such as giftedness, creativity, genius, talent, and intelligence; implications for educational practice; current issues and trends. **This course will be broadcast Winter 1991 on KTCI-TV (Channel 17), KWCM-TV (Channel 10), WDSE-TV (Channel 8), and KSMQ-TV (Channel 15) (see the blue section).**

PEsy 5690 EDUCATION OF THE GIFTED AND TALENTED (V264)

Video Cassette Course—\$198.75—3 degree credits—text price \$43—study guide \$10—Rogers
See above. **Students view the cassettes at Walter Library, the Duluth Center, Rochester Center, and the Morris Center, or on their Home VCR (see the blue section).**

Electrical Engineering (IT)

EE 3351 INTRODUCTION TO LOGIC DESIGN (2903)

\$265—4 degree credits—text price \$59—Kinney
Boolean algebra and logic gates. Combinational logic and design examples. Design with MSI logic devices. Sequential logic and design of sequential logic systems. (Prerequisite: IT sophomore standing)

EE 3352 INTRODUCTION TO MICROPROCESSORS (2904)

10 lessons—\$265 (plus equipment)—4 degree credits—text price \$54—Kinney
Basic computer organization and assembly language programming. Instruction types and addressing modes. Binary and BCD arithmetic. Subroutines. Program assembly. Integral laboratory using Z80-based educational system. Independent Study has the microprocessor equipment for sale. (Prerequisite: IT sophomore standing or consent of instructor)

Engineering

Also see the following departmental listings for course offerings:

Electrical Engineering
Mechanical Engineering
Civil Engineering

Engr 3016 DEFORMABLE BODY MECHANICS (3238.1) (U of M Duluth)

8 lessons—\$232—4 degree credits—text price \$62—McDonald
Introductory treatment of stress and strain at a point. Stress-strain relation in two dimensions. Linear theory of torsion. Bending stresses. Deflection of determinate and indeterminate beams. Instability. (Prerequisites: Engr 3015, Statics, and concurrent registration in Math 3380, Differential Equations I, or Math 3381, Introduction to Differential Equations) See General Information section, Duluth Credits.

English (CLA and GC)

Note: Only two Independent Study lower division English courses and one upper division course may be applied toward requirements for an English major. This does not include GC courses.

Engl 1016 INTRODUCTION TO AMERICAN LITERATURE: SOME MAJOR FIGURES AND THEMES (3671)

9 lessons—\$213—4 degree credits—text price \$52—Tilton
Examination of a few selected themes that recur in American writing. Not a survey of literary history. Main emphasis on the fate of innocence in American fiction with some attention to the ways several writers treat the problem of establishing a distinctively "American" identity.

Course Descriptions

Engl 1016 INTRODUCTION TO AMERICAN LITERATURE: SOME MAJOR FIGURES AND THEMES (A366)

Audio Cassette Course—\$213—4 degree credits—text price \$57—study guide \$10—10 audio cassettes \$24.75—Tilton

See above.

Engl 1017 INTRODUCTION TO MODERN POETRY (3676)

14 lessons—\$213—4 degree credits—text price \$35—Furia

A study of modern British and American poetry organized around themes (war, the city, nature, death, love, etc.) and including such writers as Yeats, Thomas, Auden, Eliot, Frost, Cummings, and Stevens.

Engl 1019 INTRODUCTION TO MODERN DRAMA (3677)

12 lessons—\$213—4 degree credits—text price \$36—E. Anderson

A study of modern drama, including plays by Ibsen, Strindberg, Chekhov, Synge, Shaw, O'Neill, Pirandello, Brecht, Williams, Miller, Ionesco, and Beckett. (Prerequisite: Comp 1011 or equivalent)

Engl 1020 INTRODUCTION TO LITERATURE: TOPICS—MODERN SCIENCE FICTION AND FANTASY (A364)

Audio Cassette Course—\$213—4 degree credits—text price \$44—study guide \$10—10 audio cassettes \$24.75—Hodgell

Deals with the evolution of modern science fiction and fantasy from their 19th century roots to the popular literature of today. Considers such major themes as the future of technology, religion, and sexuality in the works of Le Guin, Huxley, and Sturgeon, among others, and also the contributions of such eminent fantasists as Tolkien, CS Lewis, and Richard Adams.

Engl 1020 INTRODUCTION TO LITERATURE: TOPICS—MODERN SCIENCE FICTION AND FANTASY (K364)

20 lessons—\$213—4 degree credits—text price \$44—study guide \$10—Hodgell

See above. **This course will be broadcast Spring 1991 on KUMD radio, 103.3 FM (see the blue section).**

Engl 3111 SURVEY OF ENGLISH LITERATURE I (3657)

12 lessons—\$221—4 degree credits—text price \$30—1 audio cassette \$3.50—McNaron

A historical survey of the major figures, movements, and trends in English literature. This course will consider the works of Chaucer, Spenser, Shakespeare, Marvell, and Donne.

Engl 3112 SURVEY OF ENGLISH LITERATURE II (3658)

12 lessons—\$221—4 degree credits—text price \$30—McNaron

A continuation of Engl 3111, this course deals with Milton, Johnson, Dryden, Swift, Austen, and Pope.

Engl 3113 SURVEY OF ENGLISH LITERATURE III (3659)

14 lessons—\$221—4 degree credits—text price \$33—McNaron

A continuation of Engl 3112, this course considers the works of Blake, Wordsworth, Coleridge, Keats, Tennyson, the Brownings, the Shelleys, Byron, Carlyle, Dickens, Eliot, Yeats.

Engl 3241 SHAKESPEARE I (3650)

12 lessons—\$221—4 degree credits—text price \$34—Shaw

Study of Shakespeare's early and middle plays, with attention to history, literary values, and theatrical performance. Students will read *A Midsummer Night's Dream*, *Romeo and Juliet*, *Henry IV, Part I*, *Henry V*, *Much Ado About Nothing*, *Julius Caesar*, *Comedy of Errors*, *Othello*, and *Hamlet*.

Engl 3242 SHAKESPEARE II (3651)

12 lessons—\$221—4 degree credits—text price \$31—Shaw

Study of Shakespeare's middle and late periods, with attention to literary values, theatrical performance, and textual problems. Students will read *As You Like It*, *Twelfth Night*, *Measure for Measure*, *Macbeth*, *King Lear*, *Antony and Cleopatra*, *Coriolanus*, *The Winters Tale*, and *The Tempest*.

Engl 3410 MAJOR AMERICAN WRITERS: FITZGERALD AND HEMINGWAY (A365)

Audio Cassette Course—\$221 (plus texts)—4 degree credits—study guide \$10—10 audio cassettes \$24.75—Furia

An examination of the writings of two contemporary early 20th century writers—F. Scott Fitzgerald and Ernest Hemingway.

Course Descriptions

Engl 3410 MAJOR AMERICAN WRITERS: VOICES AND VISIONS IN AMERICAN POETRY (V361)

Video Cassette Course—\$221 (plus texts)—4 degree credits—Furia

A study of major American poets, such as Whitman, Dickinson, Frost, Pound, Hughes, and Plath, through an analysis of representative works and video programs on the life, times, and poems of each poet. **Students view the video cassettes at Walter Library or on their Home VCR (see the blue section). This course is now in preparation; please inquire before enrolling.**

Engl 3411 SURVEY OF AMERICAN LITERATURE TO 1850 (3672)

11 lessons—\$221—4 degree credits—text price \$62—McNaron

The development of American literature and thought from the beginnings through the early American Renaissance. Authors studied include some from the colonial and early national periods and such major figures as Poe, Emerson, and Hawthorne.

Engl 3412 SURVEY OF AMERICAN LITERATURE, 1850-1900 (3682)

15 lessons—\$221—4 degree credits—text price \$96—McNaron

American literature from the American Renaissance to the end of the 19th century. Among the authors studied are Whitman, Dickinson, Twain, Crane, and Chopin.

Engl 3413 SURVEY OF AMERICAN LITERATURE, 1900-1945 (K375)

16 lessons—\$221 (plus texts)—4 degree credits—McNaron

American literature from the end of the 19th century to the 1960s. Authors studied include Frost, Eliot, H.D., Cather, Fitzgerald, Morrison, Faulkner, Hurston, and Wright, as well as a selection of contemporary poets. **This course will broadcast Winter 1991 on KUOM radio, 770 AM (see the blue section).**

Engl 3455 AMERICAN SHORT STORY (3684)

14 lessons—\$221—4 degree credits—text price \$23—Furia

Students will study the works of Irving, Poe, Melville, Crane, Cather, Hemingway, Updike, Cheever, and other authors.

Engl 3851 THE ENGLISH LANGUAGE (V360)

Video Cassette course—\$221—4 degree credits—text price \$30—study guide \$10—Tilton

An introduction to the English language, including historical changes, syntax, phonetics and phonology, semantics, pragmatics, British and American dialects, and the acquisition of English as a first language. **Students view the cassettes at Walter Library.**

Engl 3910 TOPICS IN ENGLISH AND AMERICAN LITERATURE: THE CELTIC WORLD (A360)

Audio Cassette Course—\$221—4 degree credits—text price \$50—10 audio cassettes \$24.75—study guide \$10—Suppe

A wide-ranging introductory survey of the history, music, folk ways, and traditional oral culture of the six Celtic countries (Brittany, Cornwall, Ireland, Isle of Man, Scotland, and Wales). Topics considered are ancient culture; tribal society; saints, druids, bards, poets; the age of King Arthur; languages; and the future of Celtic culture.

Engl 3910 TOPICS IN ENGLISH AND AMERICAN LITERATURE: D. H. LAWRENCE AND FREUD (3688)

10 lessons—\$221—4 degree credits—text price \$41—Lock

An intensive reading of major works by Lawrence and Freud with an emphasis on sexuality and the individual, the family, and the group within modern culture.

Engl 3910 TOPICS IN ENGLISH AND AMERICAN LITERATURE: D.H. LAWRENCE AND FREUD (A374)

Audio Cassette Course—\$221—4 degree credits—text price \$56—10 audio cassettes \$24.75—study guide \$10—Lock and Mishler

An intensive reading of the prose fiction and poetry of D. H. Lawrence alongside key texts by Freud. The course will examine modern culture and its discontents as interpreted by these two writers.

Engl 3920 TOPICS IN ENGLISH AND AMERICAN LITERATURE: MODERN WOMEN WRITERS (3685)

12 lessons—\$221—4 degree credits—text price \$42—Poulakis

Readings in fiction and poetry by British and American women writers from 1900 to the present. Kate Chopin, Edith Wharton, Virginia Woolf, Doris Lessing, Eudora Welty, Sylvia Plath, Anne Sexton, Toni Morrison, Audre Lorde, and Adrienne Rich are among the writers included. Emphasis is on how these

Course Descriptions

writers perceived themselves as women and as artists, their analyses of the roles of women in modern society, and the formal literary qualities of their works.

Engl 3940 FIGURES IN ENGLISH AND AMERICAN LITERATURE: THE WOMAN WRITER: 19TH CENTURY FICTION (3686)

12 lessons—\$221—4 degree credits—text price \$32—Poulakis

Short stories and novels by 19th century women writers—Jane Austen, Elizabeth Gaskell, Charlotte Bronte, Harriet Beecher Stowe, George Eliot, Sarah Orne Jewett, Mary E. Wilkins Freeman, and Charlotte Perkins Gilman. Emphasizes the ways women writers' professional roles evolved during the 19th century, the conflicts they faced as their careers developed, the extent to which their writing satisfied the requirements of their audiences, and the formal literary qualities of their works.

Engl 3940 FIGURES IN ENGLISH AND AMERICAN LITERATURE: HEMINGWAY (3689)

14 lessons—\$221—4 degree credits—text price \$23—study guide \$10—Solotaroff

The course will cover what most critics feel to be the most impressive segment of Hemingway's career, the period between 1922 and 1929. Students will read two novels from this period—*The Sun Also Rises* and *A Farewell to Arms*—and two collections of stories: *In Our Time* and *Men without Women*.

Engl 5153 20TH CENTURY ENGLISH NOVEL (3660)

15 lessons—\$221—4 degree credits—text price \$58—Reed

A study of the British novel in the 20th century, emphasizing some of its main ideas, techniques, and relationships to the history of the novel. Selected authors of historical or representative importance, such as Forster, Joyce, Lawrence, Woolf, Waugh, Cary, Amis, Sillitoe, and Murdoch. (Prerequisite: Comp 1002 or equivalent and 5 additional credits in either English or Humanities)

Engl 5175 MODERN DRAMA SINCE 1920: PIRANDELLO TO PINTER (3661)

18 lessons—\$221—4 degree credits—text price \$66—Leyasmeyer

Introduction to the themes and techniques of modern drama since the 1920s. Course includes discussions of the nature of the theatrical play, the "modernism" in modern drama, and 13 important plays written from 1920 to 1960 by 10 major playwrights—Pirandello, Anouilh, Giradoux, O'Neill, Miller, Lorca, Williams, Brecht, Beckett, and Pinter.

Engl 5363 JAMES JOYCE (A371)

Audio Cassette Course—\$221—4 degree credits—text price \$64—10 audio cassettes \$24.75—study guide \$10—C. Anderson

An introduction to the life and works of Joyce, including the epiphanies, the poems, the play, *Dubliners*, *A Portrait of the Artist as a Young Man*, *Ulysses*, and bits of *Finnegans Wake*.

Engl 5432 AMERICAN POETRY (3687)

15 lessons—\$221—4 degree credits—text price \$69—Furia

An examination of American poetry from 1890 to 1956. Includes historical and intellectual background, and poetic theory. Poets discussed include Frost, Stevens, Pound, Eliot, Moore, and Williams.

GC 1365 LITERATURES OF THE UNITED STATES (3611)

14 lessons—\$213—4 degree credits—text price \$23—Gidmark

A historic survey and analysis of nearly 30 giants of American fiction. Students will examine the development of the form of the short story in America to enhance their understanding and appreciation of a wide range of writers, from Irving's early sketches to Barthelme's and Coover's present-day experiments.

GC 1371 LITERATURE: READING SHORT STORIES (3610)

10 lessons—\$213—4 degree credits—text price \$24—Kurak

Representative short stories by American, British, and Continental writers. This course considers how individual writers have used the short story to express their ideas about human experience.

GC 1816 AFRO-AMERICAN LITERATURE (3612)

9 lessons—\$213—4 degree credits—text price \$56—C.A. Miller

Students read and evaluate the poetry, drama, folklore, short stories, and longer fiction of black authors. Through literature, students assess the artists' own perceptions and interpretations of black culture in America from colonial times to the present.

Course Descriptions

GC 3352 PHILOSOPHY THROUGH LITERATURE (3606)

12 lessons—\$221—4 degree credits—text price \$29—Kurak

Readings in literary forms such as the novel, short story, poetry, and drama provide instances of broad philosophical problems including individualism and responsibility, free will and determinism, knowledge and values, and the status of the artist in society. Essays in philosophy will acquaint students with various philosophic perspectives and illustrate the contrast between Western and Oriental world views.

CLR 5414 EUROPEAN FOLK TALES (A362)

Audio Cassette Course—\$221—4 degree credits—text price \$47—study guide \$10—10 audio cassettes \$24.75—Liberman

This course is devoted to the folk tales of Germany, Scandinavia, France, Russia, and England. It discusses the structure, message for adults and children, origins of folk tales as a genre, and compares the tales of different nations and states the differences and similarities among them. Folk tales will be analyzed within the broader context of oral literature and folklore.

Creative and Professional Writing

EngW 3102 INTERMEDIATE FICTION WRITING (A353)

Audio Cassette Course—\$221—4 degree credits—text price \$17—study guide \$10—10 audio cassettes \$24.75—Daniel

An examination of the essential elements in creative writing. Discussion of the creative process in writing fiction and intensive practice in the genre. Readings, discussion, and practice will include such topics as diction, structure, plotting, and dialogue. No examinations, but lesson assignments and a final portfolio. Course author is Alan Burns.

EngW 3103 INTERMEDIATE POETRY WRITING (A350)

Audio Cassette Course—\$221—4 degree credits—text price \$40—study guide \$10—10 audio cassettes \$24.75—Fischer

This course is intended to help students develop new ways of using language to explore the world around them and in them. There will be numerous writing assignments, readings in contemporary poetry, and consideration of such topics as rhythm, image, structure, diction, voice and tone.

EngW 3103 INTERMEDIATE POETRY WRITING (K350)

10 lessons—\$221—4 degree credits—text price \$40—study guide \$10—Fischer

See above. This course will be broadcast Fall 1990 on KUOM radio, 770 AM, and KUMD radio, 103.3 FM (see the blue section).

EngW 3110 TOPICS IN CREATIVE WRITING: JOURNALING INTO FICTION (A357)

Audio Cassette Course—\$221—4 degree credits—text price \$15—study guide \$10—10 audio cassettes \$24.75—Daniel

An exploration of the links between private and public writing. Students will build on the strengths and skills already present in their private writing as they move more fully into the world of the imagination to create fiction, poems, or song. The writing assignments illustrate the ways private journaling may be turned into fiction, using techniques such as dreams, prose poems, stream of consciousness, found art, and many others.

EngW 3110 TOPICS IN CREATIVE WRITING: JOURNALING INTO FICTION (K357)

10 lessons—\$221—4 degree credits—text price \$15—study guide \$10—Daniel

See above. This course will be broadcast Spring 1991 on KUOM radio, 770 AM (see the blue section).

EngW 5201 JOURNAL AND MEMOIR WRITING (A358)

Audio Cassette Course—\$221—4 degree credits—text price \$39—study guide \$10—10 audio cassettes \$24.75—Galt

Students will read selected journals and memoirs, as well as completing exercises based on the readings. The journal writing process—informal and fragmentary—will be the basis of all writing suggestions; students will be encouraged to work from memory and personal experience. The student course project will be to write a memoir or autobiographical work. Students are encouraged to submit more polished memoir or autobiography and not the originating journal exercises.

Entomology (Agriculture)

Ent 3020 PRINCIPLES OF BEEKEEPING (1004)

12 lessons—\$276—4 degree credits—text price \$20—Furgala
 Useful to both the nonexperienced and experienced beekeeper. History of beekeeping, life history and behavior of honey bees; colony and apiary management; pollination and hive products; honey bee diseases and their control.

Family Studies (Home Economics and GC)

FSoS 5001 HUMAN SEXUAL BEHAVIOR (4103)

16 lessons—\$345—5 degree credits—text price \$42—Engel
 Examination of biological, psychological, and social aspects of human sexuality. Topics include: anatomy and physiology; reproduction; birth control and abortion; sexual response, arousal, and communication; love; sex research; sexual development over the life span; gender roles and sex differences; homosexuality and bisexuality; sexual variations and economics; sexual coercion and abuse; dysfunction and therapy; sexually transmitted diseases; ethics, religion, and law; and sex education.

FSoS 5200 FAMILY RELATIONSHIPS (4107)

15 lessons—\$345—5 degree credits—text price \$50—Budd
 This course provides an analysis of the family as an institution and its system of relationships. It also surveys current developments in the study of the family and analyzes changes in American society and their influence on family life. (Prerequisite: Soc 1001 and Psy 1001 or equivalents)

FSoS 5200 FAMILY RELATIONSHIPS (T417)

10 lessons—\$345—5 degree credits—text price \$66—study guide \$10—Doherty and Kaiser
 This course will examine the family as an institution and system of relationships. It surveys current developments in the study of family, changes in American society and their influence on family life. Course will be offered in an innovative format including lectures, simulated family interaction, and participation of a studio audience. This course is applicable toward the M.Ed. degree and the Licensure in Parenting Education. (Prerequisites: Soc 1001 and Psy 1001 or equivalents) **This course will be broadcast Fall 1990 on KTCI-TV (Channel 17), KWCM-TV (Channel 10), WDSE-TV (Channel 8), and KSMQ-TV (Channel 15) (see the blue section).**

FSoS 5200 FAMILY RELATIONSHIPS (V417)

Video Cassette Course—\$345—5 degree credits—text price \$66—study guide \$10—Doherty and Kaiser
 See above. Graduate credit available only to students in the M.Ed. program. **Students view the cassettes at Walter Library or on their Home VCR (see the blue section).**

FSoS 5230 INDEPENDENT STUDY IN FAMILY SOCIAL SCIENCE: AMERICAN FAMILIES IN TRANSITION (A415)

Audio Cassette course—\$276—4 degree credits—text price \$49—10 audio cassettes \$24.75—study guide \$10—Rossmann
 The family, our most basic institution, provides us with our first anchor in society and earliest sense of identity. This course will present a comprehensive view of family life and examine historical and contemporary family issues. Focus will be on helpful information related to adjustment to rapid changes in family. **This course is available for graduate credit toward the M.Ed.**

FSoS 5240 SPECIAL TOPICS: VIOLENCE IN THE FAMILY (4113)

9 lessons—\$276—4 degree credits—text price \$39—Latts
 This course focuses on the various forms of abuse (physical, psycho-emotional, sexual) found among family members—spouses, parents and children, siblings. Attention is given to the factors that bring about or inhibit family violence, and to prevention and treatment strategies.

FSoS 5500 RACIAL AND ETHNIC MINORITY FAMILIES (4115)

9 lessons—\$207—3 degree credits—text price \$18—Burkett
 Sociological overview of family structures and family values of various American racial and ethnic groups, including blacks, Indians, Chicanos, Jews, and Asian-Americans. This course combines a study of research and case studies with individual projects to develop and enrich understanding of cultural di-

Course Descriptions

versity. You cannot receive credit for this course if you have already taken FSoS 3240, Minority Families in the United States.

GC 1722 HOME LIFE: PARENT-CHILD RELATIONSHIPS (4109)

10 lessons—\$213—4 degree credits—text price \$62—Latts

An interdisciplinary course aimed at helping students to develop their own philosophy of child rearing—attitudes, principles, and perspectives that will guide them in their relations to their children and performance of their parental responsibilities. Focus is on helpful information related to crises of parenthood. Relevant research is used to emphasize principles of parent-child relations and to prepare students for tasks of parenthood.

GC 1733 CONTEMPORARY SEX ROLES (4110)

10 lessons—\$266.25—5 degree credits—text price \$21—Thoen

An examination of the roles of men and women. Social roles and related concepts of expectations, informal and formal roles, role modification, and role reversal are explored. The goal of this course is to overcome sexual stereotyping. Focus is on analyzing the openness and rigidity of sex roles in childhood socialization; education; mate selection; marital, parental, and homemaking roles; and social trends.

Finance (Management)

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

BFin 3000 FINANCE FUNDAMENTALS (1797)

13 lessons—\$245—4 degree credits—text price \$50—Reik

A comprehensive, analytical introduction to the principal concepts of finance. The general business environment, valuation theory, financial management decisions concerning uses and sources of funds, and a survey of the nation's financial markets. Must be taken A-F. (Prerequisite: Acct 1024-1024 and Acct 1051 or Acct 3001 and at least 90 credits completed or in progress)

Food Science and Nutrition (Agriculture and Home Economics)

FScN 1102 TECHNOLOGY OF FOOD PROCESSING (4304)

14 lessons—\$213—4 degree credits—text price \$47—Zottola

An introduction to the technology of processing and distribution of foods, with reference to the prevention of biological, physical, and chemical deterioration. Changes in food composition, microbiological safety, food laws and regulations, technologies of the major food processes (canning, freezing, drying), cereal and oilseed processing are considered. (Prerequisite: high school chemistry and biology)

Forest Resources (Natural Resources)

FR 1201 CONSERVATION OF NATURAL RESOURCES (4203)

10 lessons—\$159.75—3 degree credits—text price \$47—Scholten

Current status, utilization, and sound management of natural resources with emphasis on the ecological approach. Conservation principles and their application to soil, water, forests, grasslands, wildlife, minerals, and energy sources.

French (CLA)

Fren 0001 READING FRENCH (5718)

17 lessons—\$213—no credit—text price \$28—Akehurst

Fundamentals of grammar; reading of appropriate prose. Prepares for graduate reading examination in French. Must be taken S-N.

Fren 1101 BEGINNING FRENCH I (5711)

10 lessons—\$266.25—5 degree credits—text price \$60—8 audio cassettes \$20.25—Alcaya

An audio-lingual approach to elementary French, adapted for home use.

Course Descriptions

Fren 1102 BEGINNING FRENCH II (5712)

7 lessons—\$266.25—5 degree credits—text price \$60—5 audio cassettes \$13.75—Alcaya
Continuation of French 1101. (Prerequisite: Fren 1101 or 1 year high school French)

Fren 1103 BEGINNING FRENCH III (5713)

7 lessons—\$266.25—5 degree credits—text price \$60—5 audio cassettes \$13.75—Alcaya
Continuation of French 1102. (Prerequisite: Fren 1102 or 2 years high school French)

Fren 3104 FRENCH LITERARY TEXTS: NOVEL, POETRY, DRAMA (5710)

15 lessons—\$221—4 degree credits—text price \$26—Akehurst
Provides training in reading literary works of poetry, drama, prose. Completely in French.

Fren 3602 LITERATURE IN ENGLISH TRANSLATION: FLAUBERT AND MODERN WRITING (5714)

11 lessons—\$221—4 degree credits—text price \$37—Lock
An intensive reading in English of major works by Flaubert in the context of Freudian criticism and modern writing.

Gardening

See Horticultural Science

General College

As nearly as possible, General College courses are planned to be complete in themselves. Emphasis is on relationships within and among fields of knowledge rather than intensive study of isolated segments. Most courses do not have prerequisites.

Refer to the following pages for General College courses.

Arts, Communication, and Philosophy Division

- GC 0402 Grammar and Usage Review, p. 19
- GC 1085 How to Study, p. 54
- GC 1355 Ethics, p. 46
- GC 1365 Literatures of the United States, p. 27
- GC 1371 Literature: Reading Short Stories, p. 27
- GC 1816 Afro-American Literature, p. 27
- GC 3352 Philosophy Through Literature, p. 28
- GC 3425 Writing for Business and the Professions, p. 21

Science, Business, and Mathematics Division

- GC 0611 Mathematics Skills Review, p. 43
- GC 0621 Elementary Algebra, p. 43
- GC 0625 Intermediate Algebra, Part I, p. 43
- GC 0631 Intermediate Algebra, Part II, p. 43
- GC 1161 Solar System Astronomy, p. 14
- GC 1162 Stellar Astronomy, p. 14
- GC 1166 Principles of Chemistry, p. 17
- GC 1235 Law in Society, p. 16
- GC 1511 Introduction to Modern Business, p. 16

Course Descriptions

- GC 1513 Principles of Small Business Operations, p. 16
- GC 1534 Practical Law, p. 16
- GC 1540 Accounting Fundamentals I, p. 16
- GC 1542 Accounting Fundamentals II, p. 16
- GC 1551 Marketing: Introduction, p. 16
- GC 1553 Marketing: Principles of Management, p. 16
- GC 1571 Introduction to BASIC and to Microcomputers, p. 21
- GC 3115 Evolution of Life on Earth, p. 22
- GC 3560 Personnel Administration, p. 17
- GC 3571 Computer Approach to Problem Solving, p. 21
- GC 3583 Estate Planning, p. 17
- GC 3602 Applied Supervision, p. 17

Social and Behavioral Science Division

- GC 1211 People and Problems, p. 53
- GC 1283 Psychology of Human Development, p. 51
- GC 1284 Behavior Problems of Children, p. 18
- GC 1722 Parent-Child Relationships, p. 30
- GC 1733 Contemporary Sex Roles, p. 30

Geography (CLA)

Geog 1501 THE LANGUAGE OF MAPS (4409)

12 lessons—\$266.25 (plus texts)—5 degree credits—Gersmehl
Study of various phases of the process of using maps to communicate ideas. Ways of describing location, distance, direction, area, and other basic spatial concepts. Data classification, map symbols, methods of analyzing patterns on maps. Use of maps to inform and/or persuade.

Geog 3101 GEOGRAPHY OF THE UNITED STATES AND CANADA (4453)

14 lessons—\$221—4 degree credits—text price \$47—Lockwood
Provides an opportunity to study and evaluate the character and diversity of the various regions of the United States and Canada. The influence of both cultural and physical environments upon people and their use of the land is emphasized. Cities are observed as the dominant feature of the technological-industrial complex. Problems are considered on both a national and regional basis.

Geog 3121 GEOGRAPHY OF LATIN AMERICA (4450)

14 lessons—\$221—4 degree credits—text price \$57—Pucci
Provides an opportunity to study and evaluate the character and diversity of Mexico, Central America, the Caribbean, and South America. Individual countries and major regions within them are analyzed. The influence of both cultural and physical elements upon people and their use of the land is emphasized. Problems are considered on both a national and regional basis.

Geog 3181 GEOGRAPHY OF THE SOVIET UNION (4452)

15 lessons—\$221—4 degree credits—text price \$40—Young
An introduction to the diverse characteristics and regions of the Soviet Union. Emphasizes a topical analysis of the physical, cultural, and economic phenomena in the U.S.S.R., including the impact of present political and economic trends. Each lesson examines one or two major regions of the Soviet Union.

Geog 3355 ENVIRONMENTAL PROBLEMS (4454)

4 lessons—\$221—4 degree credits—text price \$9—Squires
Environmental problems associated with human activities.

Geology and Geophysics (IT)

Geo 1001 THE DYNAMIC EARTH: AN INTRODUCTION TO GEOLOGY (4501)

18 lessons—\$213—4 degree credits—text price \$45—Staff

An introduction to general geology. Survey of the main features of the physical world and the processes that have evoked them. Topics include: maps, rock formation, weathering, soils, deserts, oceans, and the phenomena of earthquakes, glaciers, and volcanoes.

Geo 1002 HISTORICAL GEOLOGY (4503)

13 lessons—\$213—4 degree credits—text price \$41—Sloan

Evolution of the earth and its inhabitants from their origins to the present, with emphasis on the past 600 million years. The first part of the course outlines the fundamentals of geology, evolution, and paleontology. Does not include lab.

German (CLA)

Ger 1101 BEGINNING GERMAN I (5805)

15 lessons—\$266.25—5 degree credits—text price \$42—2 audio cassette \$6.75—Peters

Introduction to the basic structures of the German language and its most frequently used vocabulary. Intended to give a student a foundation in the skills of reading, writing, and listening.

Ger 1102 BEGINNING GERMAN II (5806)

15 lessons—\$266.25—5 degree credits—text price \$37—2 audio cassettes \$6.75—Peters

Continuation of Ger 1101. (Prerequisite: Ger 1101 or 1 year of high school German) **This course is now in preparation; please inquire before enrolling.**

German 1103 BEGINNING GERMAN III (5807)

16 lessons—\$266.25—5 degree credits—Peters

Review of selected high-frequency grammar points; emphasis on vocabulary building, reading of edited texts, and introduction to composition. (Prerequisite: German 1102 or 2 years of high school German). **This course is now in preparation; please inquire before enrolling.**

Ger 3610 GERMAN AUTHORS AND/OR TOPICS IN TRANSLATION: POST-WAR DEVELOPMENTS AS SEEN THROUGH THE WORKS OF HEINRICH BÖLL (5809)

10 lessons—\$221—4 degree credits—text price \$68—Weiss

Through reading Böll's novels and short stories, students will gain an understanding of the development of West German society since 1945. In addition to reading Böll's fiction, students will learn about post-war Germany through extensive study notes and some outside reading. Students will also be asked to use media resources (films, magazines, video tapes, as available) to round out their knowledge of contemporary Germany.

Greek (CLA)

Grk 1101 BEGINNING CLASSICAL GREEK I (5901)

15 lessons—\$266.25—5 degree credits—text price \$20—1 audio cassette \$3.50—L. Smith

An introduction to Homeric and Classical Greek language: alphabet, vocabulary, and idioms. Selected readings from *Illiad* and *Odyssey* of Homer and Classical Greek selections of moderate difficulty. Written translation exercises, oral exercises, and introduction to scansion and meter.

Health Science Units (Health Sciences)

HSU 5008 SOCIAL AND PSYCHOLOGICAL ASPECTS OF PHYSICAL DISABILITY (V466)

Video cassette course—\$291—4 degree credits—study guide \$10—text price \$67—Atheistan

Communication barriers often exist between able-bodied people and those with physical disabilities. By understanding the psychological and social impact of various sensory and motor disabilities, course participants should be better equipped to interact with disabled persons on a professional or personal level. Particularly directed toward nurses, physicians, therapists, counselors, teachers, and health administrators with the goal of helping them to provide more effective services. Employers, family members, friends, and disabled individuals may also find this course useful. Course content will include information about common disabling conditions, the process of psychological adjustment to disability, the impact on families, societal attitudes, new advances related to independent living, educational and vocational pro-

Course Descriptions

grams for the disabled, and medical rehabilitation and long term care. Course co-author is Dr. Nancy Creve. Also available as PMed 5445. Students may receive credit for only one of the following: HSU 5008 or PMed 5445. Students view the cassettes at Walter Library, Duluth Center, the Morris Center, or on their Home VCR (see the blue section).

HSU 5008 SOCIAL AND PSYCHOLOGICAL ASPECTS OF PHYSICAL DISABILITY (T466)

10 lessons—\$291—4 degree credits—study guide \$10—text price \$67—Atheistan

See above. This course will be broadcast Fall 1990 on KTCI-TV (Channel 17) (see the blue section).

History (CLA)

Hist 1001 INTRODUCTION TO MODERN EUROPEAN HISTORY SINCE THE MIDDLE AGES (4737)

12 lessons—\$213—4 degree credits—text price \$60—Dachowski

A survey of European history to the 18th century. Emphasis is on the rise of the nation state and the role of Christianity and exploration in its development. Hist 1001, 1002, 1003 need not be taken in sequence.

Hist 1002 INTRODUCTION TO MODERN EUROPEAN HISTORY SINCE THE MIDDLE AGES (4738)

12 lessons—\$213—4 degree credits—text price \$60—Dachowski

A survey of European history in the 18th and 19th centuries. Emphasis is on the struggle for control of the state, the Age of Reason, the French Revolution. Hist 1001, 1002, 1003 need not be taken in sequence.

Hist 1003 INTRODUCTION TO MODERN EUROPEAN HISTORY SINCE THE MIDDLE AGES (4739)

12 lessons—\$213—4 degree credits—text price \$60—Dachowski

A survey of European history in the 19th and 20th centuries. Emphasis is on the impact of industrialization on 19th-century civilization and the development of the international problems of the 20th century. Hist 1001, 1002, 1003 need not be taken in sequence.

Hist 1051 ANCIENT CIVILIZATION I (4761)

12 lessons—\$213—4 degree credits—text price \$30—T. Jones

Survey of the rise of civilization in the Ancient Near East from the earliest times to 500 B.C. Emphasis is on the origin of culture and its development in complexity from the primitive to the civilized stage. Special attention is given to the civilizations of Babylonia, Egypt, Indus Valley, Syria, Palestine, and Crete. Students must have access to a large library to successfully complete this course.

Hist 1052 ANCIENT CIVILIZATION II (4762)

12 lessons—\$213—4 degree credits—text price \$40—T. Jones

History of the rise and flowering of Greek civilization from the earliest times to the death of Alexander the Great in 323 B.C. Special emphasis is placed on Greek civilization in the fifth century (Age of Pericles) with attention to the political, social, literary, artistic, and philosophic achievements of that period. (No prerequisite; Hist 1051 helpful in providing background for the Greek period) Students must have access to a large library to successfully complete this course.

Hist 1053 ANCIENT CIVILIZATION III (4763)

12 lessons—\$213—4 degree credits—text price \$37—T. Jones

The climax of ancient civilization during the Hellenistic Age (323-133 B.C.) and the Roman Imperial Period, followed by the decline of Rome and of ancient civilization (to about A.D. 300). The three main topics to be considered are civilization of the ancient world at its peak, rise and flowering of Roman culture, and reasons for the decline of ancient civilization. Special attention will be paid to political institutions, art, literature, economics and society, philosophy, and ancient science. (No prerequisite; Hist 1051 and 1052 recommended for background) Students must have access to a large library to successfully complete this course.

Hist 1151/3151 ENGLISH HISTORY TO THE 17th CENTURY (4709/4710)

12 lessons—\$213/\$221—4 degree credits—text price \$74—D. Bachrach

Part one of a two-part sequence covers the history of England from earliest times to the death of Queen Elizabeth I. Students enrolling in the 3000-level course will be expected to do extra work.

Hist 1152/3152 ENGLISH HISTORY FROM THE 17th CENTURY TO THE PRESENT (4711/4712)

12 lessons—\$213/\$221—4 degree credits—text price \$63—D. Bachrach

Part two of this two-part sequence covers the period from the Stuart Accession through the Cold War. Students enrolling in the 3000-level course will be expected to do additional work.

Course Descriptions

Hist 1301 AMERICAN HISTORY I (4728)

12 lessons—\$213 (plus texts)—4 degree credits—Pearson
United States history from colonial times to Reconstruction. A survey course emphasizing political, economic, social, and diplomatic history of the U.S. to 1877.

Hist 1301 AMERICAN HISTORY I (A472)

Audio Cassette Course—\$213—4 degree credits—text price \$68—study guide \$10—audio cassettes \$40—Lindman
See above. Funding for production provided by The Annenberg/CPB Project—providing opportunities for higher education through telecommunications.

Hist 1302 AMERICAN HISTORY II (4729)

12 lessons—\$213 (plus texts)—4 degree credits—Pearson
United States history survey course from 1865 to the present.

Hist 1305 CULTURAL PLURALISM IN AMERICAN HISTORY (4759)

16 lessons—\$213 (plus texts)—4 degree credits—Townsend
A survey of the development of American society focusing on the roles of African-Americans, Native Americans, Asian-Americans, and Hispanic-Americans. Issues of cultural pluralism, empowerment, racism, and intergroup relations are explored within a comparative historical framework. **This course is now in preparation; please inquire before enrolling.**

Hist 1451/3451 SURVEY OF CIVILIZATIONS IN ANCIENT ASIA (4741/4744)

15 lessons—\$213/\$221—4 degree credits—text price \$31—Kopf
Ancient societies in East, South, and West Asia. Students enrolling in the 3000-level course will be expected to do extra work.

Hist 1452/3452 SURVEY OF ASIAN CIVILIZATIONS IN THE MIDDLE PERIOD (4742/4745)

12 lessons—\$213/\$221—4 degree credits—text price \$31—Kopf
Fifth through the 18th centuries. Students enrolling in the 3000-level course will be expected to do extra work.

Hist 1453/3453 SURVEY OF ASIAN CIVILIZATIONS IN THE MODERN ERA (4743/4746)

15 lessons—\$213/\$221—4 degree credits—text price \$31—Kopf
The modern era. Students enrolling in the 3000-level course will be expected to do extra work.

Hist 3551 HISTORY OF THE ANCIENT NEAR EAST (4764)

10 lessons—\$221 (plus texts)—4 degree credits—T. Jones
In-depth study of selected topics in early Mesopotamian history (Sumerian-Old Babylonian period to 1550 B.C.). Required reading, written assignments, and major research paper in lieu of final examination. Students must have access to a large library to complete this course. (Prerequisite: Hist 1051 or equivalent) **This course is now in preparation; please inquire before enrolling.**

Hist 3552 HISTORY OF ANCIENT EGYPT (4765)

10 lessons—\$221 (plus texts)—4 degree credits—T. Jones
In-depth study of Egypt and its neighbors to 1200 B.C. Required readings, written assignments, and a major research paper in lieu of final exam. Students must have access to a large library to complete this course. (Prerequisite: Hist 1051 or equivalent) **This course is now in preparation; please inquire before enrolling.**

Hist 3700 TOPICS IN EUROPEAN HISTORY: TRAVELERS AND THEIR JOURNALS (A475)

Audio Cassette Course—\$221—4 degree credits—text price \$60—study guide \$10—10 audio cassettes \$24.75—J. Parker
A study of the journals of major explorers and travel writers from ancient to modern times, emphasizing changes in motives, points of view and literary style. Students will have an opportunity to present their own travel journals.

Hist 3700 TOPICS IN EUROPEAN HISTORY: COLUMBUS AND THE NEW WORLD (4758)

8 lessons—\$221—4 degree credits—text price \$41—study guide \$10—M. A. Nelson
This course places the familiar figure of Christopher Columbus in the context of the world of the late fifteenth century. Readings examine Europe and the rest of the known world, the New World of the Western Hemisphere, the motives and means through which Europeans expanded their interests around the globe, and the far-reaching consequences of Columbus's voyages.

Course Descriptions

Hist 3700 TOPICS IN EUROPEAN HISTORY: THE LIFE AND TIMES OF PETER THE GREAT (4787)

18 lessons—\$221—4 degree credits—text price \$30—study guide \$10—T. Noonan

A study of tsar Peter the Great of Russia and his impact both on his country and on Europe as a whole. In looking at Peter's 43 year reign, two major themes will be explored—Peter's efforts to westernize Russia and his constant wars against neighboring countries, especially Sweden. Topics that will be studied include Peter's early years, his various wars, battles, and peace treaties, and the reforms he introduced into Russian life.

Hist 3700 TOPICS IN EUROPEAN HISTORY: SWEDEN, 1560-1721: EXPERIMENT IN EMPIRE (4809)

8 lessons—\$221 (plus study guide)—4 degree credits—text price \$28—Metcalf

Study of the formation and dismantling of Sweden's Baltic empire between 1560 and 1721 highlights the administrative, economic, demographic, and social foundations of the experience, as well as the politics and diplomacy of the period. Students will work with primary sources in translation as well as several scholarly texts.

Hist 3722 EUROPE IN THE ERA OF WORLD WAR II (4713)

10 lessons—\$221—4 degree credits—text price \$53—10 optional audio cassettes \$24.75—Munholland

Origins and diplomatic background of World War II, strategic objectives and campaigns, and the political and social impact of the war. **Students must indicate whether they want to take the course with or without the optional audio cassettes.**

Hist 3725 THE WORLD CONFLICT, 1931-1945 (4760)

10 lessons—\$221—4 degree credits—text price \$48—Munholland

The global character of World War II. Discusses the causes of the war, the rise of dictatorships, preparations for war in Germany, Italy, and Japan, the response of the Allies, and the war itself, which engulfed nations on all continents and cost uncounted millions of lives.

Hist 3812 CIVIL WAR AND RECONSTRUCTION (4755)

11 lessons—\$221—4 degree credits—text price \$45—C. Miller

Politics and society from 1848 to 1877. The Compromise of 1850 and the "finality" period; nativism and the Know-Nothing movement; party realignment and the rise of the Republican Party; the West, Dred Scott, John Brown, and the coming of the Civil War; Lincoln, Douglas, and the crisis of secession; the rise and fall of the Confederacy; Grant, Sherman, and the politics of total war; emancipation; presidential and radical reconstruction; the Ku Klux Klan; the origins of the Gilded Age; redemption and the Compromise of 1877.

Hist 3822 THE UNITED STATES IN THE 20TH CENTURY: 1932-1960 (V473)

10 lessons—\$221 (plus texts and study guide)—4 degree credits—Berman

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; labor relations. Includes a documentary narrated by Berman. **Students view the cassettes at Walter Library or on their Home VCR (see the blue section). This course is now in preparation; please inquire before enrolling.**

Hist 3841 AMERICAN BUSINESS HISTORY (V476)

Video Cassette Course—\$221—4 degree credits—text price \$47—study guide \$20—Green

This course explores the role of business leaders such as James J Hill, Carnegie, Rockefeller, Morgan, and Ford, the development of business institutions, and the interaction of business with economic developments, social values, and government economic policies. **Students view the cassettes at Walter Library, Morris Center or on their Home VCR (see the blue section).**

Hist 3883 20TH CENTURY AMERICAN FOREIGN POLICY (4708)

12 lessons—\$221 (plus texts)—4 degree credits—Hoovestal

American foreign policy from Teddy Roosevelt to Reagan. Deals with issues such as American isolationism, economic diplomacy, World War II and the Cold War, and Vietnam. **This course is now in preparation; please inquire before enrolling.**

Course Descriptions

Hist 3910 TOPICS IN AMERICAN HISTORY: A CENTURY OF AMERICAN IMMIGRATION: 1884-1984 (4756)

8 lessons—\$221—4 degree credits—text price \$42—Lintelman

This course presents a history of a century of American immigration. Considered are migration patterns, ethnic communities and conflict, maintenance of ethnic cultures, immigration legislation, social mobility, and the emergence of a pluralistic America. Students will compare immigrant experiences in both urban and rural settings.

Hist 5138 BYZANTINE HISTORY I (4810)

12 lessons—\$221—4 degree credits—text price \$34—T. Jones

The later Roman Empire (A.D. 284-565). Establishment of the new regime by Diocletian and Constantine the Great; founding of Constantinople and the imperial alliance with the Christians; Theodosius the Great and the two-fold division of the empire; Age of Justinian (A.D. 527-565): foreign, domestic and religious affairs, art and architecture, literature and law. Students must have access to a large library to complete this course.

Hist 5131 BYZANTINE HISTORY II (4811)

12 lessons—\$221—4 degree credits—text price \$21—T. Jones

The middle period of Byzantine history—from the death of Justinian (565 AD) to the accession of Basil II (976 AD). Heraclius and the defeat of the Sasanians; the rise of Islam; barbarian pressures in the Balkans and relations with the West; Isaurian, Amorian, Macedonian dynasties; Iconoclasm; aspects of Byzantine culture—religion, art, architecture, literature, law, and science. Students must have access to a large library to complete this course.

Hist 5331 AMERICAN CONSTITUTIONAL HISTORY (4804)

10 lessons—\$221—4 degree credits—text price \$46—Carroll

The origins and developments of constitutional government in America with emphasis on the role of constitutional politics in the evolution of public policy. This course emphasizes the English and colonial background through the Reconstruction period.

Hist 5332 AMERICAN CONSTITUTIONAL HISTORY (4805)

10 lessons—\$221—4 degree credits—text price \$50—Carroll

A continuation of Hist 5331. Emphasizes the Constitution and the rule of law in modern America. Includes an optional video tape with discussions of the Constitution by eminent judges and scholars. **Students must indicate whether they want to take the course with or without the optional video tape. This course is now in preparation; please inquire before enrolling.**

Horse Production

See Animal Science

Horticultural Science (Agriculture)

Note: Students can earn a maximum of 12 credits in Hort 1010. Hort 1010 courses **cannot** be used for a degree in Horticulture.

Hort 1010 HOME HORTICULTURE: LANDSCAPE GARDENING AND DESIGN (5152)

12 lessons—\$213—4 degree credits—text price \$35—Hard

Working knowledge of propagation and culture of common landscape materials: turf, flowers, trees, and shrubs. Principles and practices of gardening; prepared for beginners, but also valuable for the advanced or experienced gardener. Textbook assignments and home projects in propagating plants for the garden. Topics include: planting, transplanting, seeds, soils, fertilizers, preparing beds and planting areas, selecting a good garden site, controlling garden pests, weeding, watering, cultivating. Also discusses annuals, perennials, bulbs, and roses for northern gardens. If you take this course, you **cannot** also receive credit for the Video Cassette version listed below.

Hort 1010 HOME HORTICULTURE: LANDSCAPE GARDENING (V511)

Video Cassette Course—\$213—4 degree credits—text price \$40—study guide \$10—Hard

Basic introduction to a working knowledge of home landscape gardening and design. Topics include propagation and culture of common house plants and landscape materials—turf, flowers, trees, and

Course Descriptions

shrubs. Illustration of various techniques to enable the home gardener to gain confidence in planning and caring for indoor and outdoor plants. Assumes little or no previous experience with plants. **Students view the cassettes at Walter Library, Morris Learning Center, or on their Home VCR (see the blue section).** If you take this course, you **cannot** receive credit for Hort 1010 (5152) listed above.

Hort 1010 HOME HORTICULTURE: LANDSCAPE MAINTENANCE (5153)

12 lessons—\$213—4 degree credits—text price \$16—Hard

This course is designed to give students a better understanding of the care and maintenance of the home landscape. Emphasizes soil management and fertility, watering, weed control, lawn care, pruning, pest management, equipment, protecting plants from summer heat and winter cold, and propagation.

Hort 1010 HOME HORTICULTURE: VEGETABLE GARDENING (5154)

13 lessons—\$213—4 degree credits—text price \$21—Hard

This course is designed to help students make good choices in the growing and care of the home vegetable garden. Topics: *planning the vegetable garden, starting seeds, soil preparation, planting and transplanting, summer care, growing salad, vine, root, cole, and perennial vegetables, harvesting and storing, and herb gardening.*

How to Study

See Study Skills

Humanities (CLA)

Hum 1001 HUMANITIES IN THE MODERN WORLD I (5205)

14 lessons—\$213—4 degree credits—text price \$51—Ouren

This course explores the 18th century Enlightenment and Romantic Reaction movements. The main themes discussed are reason, human nature, and the problem of evil. Authors discussed include Marlowe, Pope, Voltaire, Rousseau, and Goethe.

Hum 1002 HUMANITIES IN THE MODERN WORLD II (5202)

16 lessons—\$213—4 degree credits—text price \$37—Bisztray

Industrial Revolution, romanticism, socialism, individualism. Selected documents of economic and socialist theory and the romantic movement; representative works by Zola, Ibsen, Dostoevsky, Tolstoy.

Hum 1003 HUMANITIES IN THE MODERN WORLD III (5207)

15 lessons—\$213—4 degree credits—text price \$35—Ouren

The focus of this course is the late 19th century. The main topics are evolution (Darwinism) and the beginnings of Existentialism. Authors discussed include Kierkegaard, Nietzsche, Turgenev, Thomas Mann, and Chekhov.

Hum 1004 HUMANITIES IN THE MODERN WORLD IV (5208)

15 lessons—\$213—4 degree credits—text price \$53—Bisztray

Civilization between two wars; the impact of psychoanalysis; a critique of communism and national socialism; the intellectual profile of the Western world since World War II. Covers the period from World War I to the present. Authors studied include Freud, Lenin, Malraux, T. S. Eliot, Solzhenitzyn, Brecht, and Dürrenmatt.

Hum 1111 EUROPEAN HERITAGE: GREECE (5209)

15 lessons—\$213—4 degree credits—text price \$45—Ouren

This course deals with Greek culture and Greece as the birthplace of Reason. The course traces the development of Greek thought and literature from the Homeric epic, through Greek tragedy and comedy, to the dialogues of Plato.

Hum 1113 EUROPEAN HERITAGE: ROME (5210)

14 lessons—\$213—4 degree credits—text price \$39—Ouren

This course deals with major texts of Roman culture and the early development of Christianity. The major authors read are Plutarch, Virgil, the Stoics, Lucretius, St. Augustine, and the New Testament.

Course Descriptions

Hum 1301 DISCOURSE AND SOCIETY (5213)

\$213 (plus texts)—4 degree credits—Bassewitz

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. **This course is now in preparation; please inquire before enrolling.**

Hum 1302 TEXT AND CONTEXT (5214)

12 lessons—\$213 (plus texts)—4 degree credits—Crawford

Examination of varied historically grounded case studies—early 18th century art, two novels, a historical work, an anthropological work, an opera, examples of mass culture, and analysis of advertising. Ways social and political conflicts of particular moments and specific locations are represented in the discourse of these case studies. Students relate the cultural discourses represented in the case studies to the larger socio-historical conditions out of which they arise by learning to apply Marxist critical theory, discourse theory, ideological critique and theories of gender and race. **This course is now in preparation; please inquire before enrolling.**

Industrial Relations (Management)

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

IR 0001 SUPERVISION I: ELEMENTS OF SUPERVISION (2231)

11 lessons—\$159.75—3 certificate credits—text price \$43—Willford

A general discussion of basic principles of supervision in the office and factory. Survey of principles, methods, and applications for the handling of day-to-day problems of supervisors with emphasis on human relations and organizational aspects of such problems. Deals with selection, induction, and training of new employees, role of the supervisor, communication, employee appraisal, delegation, approaches to leadership, handling grievances, discipline, and employee morale.

IR 3000 TOPICS IN INDUSTRIAL RELATIONS: TEACHING LABOR RELATIONS IN THE SCHOOLS (2250)

10 lessons—\$245—4 degree credits—text price \$31—Gagala

This course enables elementary and secondary school teachers to incorporate the study of labor unions and collective bargaining into their lesson plans. Also assists teachers to discuss labor issues with their students when national and local developments demand a response. Provides a knowledge of the labor relations process as it affects the teaching profession.

IR 3007 COLLECTIVE BARGAINING AND LABOR RELATIONS (2262)

12 lessons—\$245—4 degree credits—text price \$42—Gagala

An introductory survey of collective bargaining and labor-management relations. The course examines the historical evolution of trade unions in the US, the structure and administration of trade unions, and the processes of collective bargaining and contract administration. The course work incorporates case exercises that provide students with insights into the real world nature of labor-management relations. (Prerequisite: at least 90 credits completed or in progress)

Information and Decision Sciences (Management)

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

IDSc 1010 FUNDAMENTALS OF INFORMATION DEVELOPMENT AND USE (2283)

10 lessons—\$213 (plus texts)—4 degree credits—Adams

Explores the concepts and skills that are necessary to understand data and how it can be acquired and used. Topics: computing, data handling, formal use of data in problem solving and decision making, and managing information and information resources. Students need access to a computer or the ability to come to campus to use the equipment in the University's computer labs. **This course is now in preparation; please inquire before enrolling.**

Course Descriptions

Italian (CLA)

Ital 1101 BEGINNING ITALIAN (5402)

12 lessons—\$266.25—5 degree credits—text price \$54—7 audio cassettes \$18—Carlone
Speaking, reading, and cultural objectives based on an audiolingual approach. Students learn to understand and express fundamental ideas, to write anything they can say, and to master fundamental structures of the language.

Jewish Studies (CLA)

Also see Clas 3071

JwSt 1034/3034 INTRODUCTION TO JUDAISM (V863/V864)

Video Cassette Course—\$213/\$221—4 degree credits—text price \$30—Zahavy
Concepts, movements, and institutions in the development of classical Judaism, as manifested in the literature and festivals of the Jewish people from Second Commonwealth times to the present. JwSt 3034 requires additional written assignments and reading. Also available as ReIS 1034/3034. Students may obtain credit for this course either as JwSt or ReIS, but not both, as either a lower-division course (1034) or an upper-division course (3034), but not as both. **Students view the cassettes at Walter Library or on their Home VCR (see the blue section). This course is now in preparation, please inquire before enrolling.**

JwSt 3126 MODERN JUDAISM (8610)

12 lessons—\$221—4 degree credits—text price \$50—Zahavy
What is modern Judaism? How did it take shape? To answer these questions this course moves from the roots of modern American Judaism in Eastern Europe and the immigration experience to the formation of American Judaism as a distinctive religious system and its major components: the rabbi, the community, Israel, religious obligations, and theology.

JwSt 3521 THE HOLOCAUST (A861)

Audio Cassette Course—\$221—4 degree credits—text price \$30—study guide \$10—10 audio cassettes \$24.75—Cooperman
Nazi destruction of Jewish life in Europe, 1933-1945. Historical and social background of European communities. Anti-Semitism and Nazism. Ghettos under Nazi rule; social and cultural organization, and government. Nazi terror and destruction; Jewish resistance; historical consequences.

Journalism and Mass Communication (CLA)

Journalism majors should follow requirements for pre-journalism major as shown in the **College of Liberal Arts Bulletin**.

Jour 3173 MAGAZINE WRITING (3774)

13 lessons—\$221—4 degree credits—text price \$58—10 optional audio cassettes \$24.75—Roberts

Writing nonfiction feature articles for adult consumer and trade publications is covered, as is a study of market free-lance methods, including query letters. Students will write, revise, and submit three articles to magazines or newspaper feature sections of their choice. (Not to be taken by students who have achieved major status.) **Students must indicate whether they want to take the course with or without the optional audio cassettes.**

Jour 5501 COMMUNICATION AND PUBLIC OPINION I (3792)

12 lessons—\$221—4 degree credits—text price \$41—Carter
A study of theories of communication, public opinion, and attitude change, as well as an examination of research findings about communication, opinion, and persuasion, and some of the methods and methodological problems with which consumers of such research should be familiar.

Jour 5601 HISTORY OF JOURNALISM (3791)

12 lessons—\$221—4 degree credits—text price \$41—Clepper
Development of American newspapers and periodicals from beginnings in prehistoric times to present day; rise of radio and television; relation of communications developments to political, economic, and social trends; press-government credibility crises.

Latin (CLA)

Lat 1101 BEGINNING LATIN I (6201)

15 lessons—\$266.25—5 degree credits—text price \$13—Scott
Basic grammar and vocabulary, practice in reading and writing Latin, workbook exercises, easy Latin readings, and Roman legends.

Lat 1102 BEGINNING LATIN II (6207)

17 lessons—\$266.25—5 degree credits—text price \$13—Scott
Continuation of Lat 1101. Similar in content and method, leading to connected reading in Fabulae Faciles (Easy Stories). (Prerequisite: Lat 1101 or equivalent)

Lat 1103 BEGINNING LATIN III (6208)

15 lessons—\$266.25—5 degree credits—text price \$13—Scott
A review of the elements of Lat 1101 and Lat 1102, with a shift of emphasis to longer passages of continuous reading on Roman life. A considerable amount of historical and literary background is presented in English to orient the student to the material. (Prerequisite: Lat 1102 or equivalent)

Lat 1104 LATIN PROSE: CAESAR AND OTHERS (6209)

15 lessons—\$266.25—5 degree credits—text price \$18—Scott
Selections from Cicero, Livy, and Ovid will be read. In addition to the review of Latin grammar, which will be incorporated in the readings, the selections will familiarize the student with the legends of Rome's founding and early heroes, the defeat of its army by Hannibal at Cannae, the first important speech of its most brilliant orator, Cicero, and his correspondence after the assassination of Julius Caesar, and Ovid's poetic interpretation of several Greek myths. Literary and historical background material is provided in English with each lesson. (Prerequisite: Lat 1103 or equivalent)

Lat 3105 LATIN POETRY: CICERO (6210)

16 lessons—\$276.25—5 degree credits—text price \$13—Scott
Readings from the most famous humanistic essays. (Prerequisite: Lat 1103 or equivalent)

Lat 3106 LATIN POETRY: VERGIL'S AENEID (6211)

17 lessons—\$276.25—5 degree credits—text price \$26—Scott
Readings of selections from Books I-II; background reading in Roman life and thought is included in the text. (Prerequisite: Lat 1103 or equivalent)

Law

See Business Law



Course Descriptions

Linguistics (CLA)

Ling 1001 THE NATURE OF HUMAN LANGUAGE (V352)

Video Cassette Course—\$213—4 degree credits—text price \$17—study guide \$10—Ciamons

This introductory course presents a survey of the nature of human language, its properties, its possible origins, and how it differs from animal communication. Methods of describing the sounds, structures and meanings of language are also examined, along with a consideration of the relationship between language and the brain, how children acquire language, and the different roles of language in society. Whenever possible, points are illustrated with examples from the everyday use of English. **Students view the cassettes at Walter Library, the Morris Learning Center, or on their Home VCR (see the blue section).**

Ling 1001 THE NATURE OF HUMAN LANGUAGE (T352)

10 lessons—\$213—4 degree credits—text price \$17—study guide \$10—Ciamons

See above. **This course will be broadcast Fall 1990 on KTCTV (Channel 17) (see the blue section).**

Management (Management)

Also see Business Studies

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

Mgmt 3001 FUNDAMENTALS OF MANAGEMENT (2280)

12 lessons—\$245—4 degree credits—text price \$50—Weber

Leadership and management functions such as those required to establish goals, policies, procedures, and plans. Motivation, planning and control systems, and concepts of organizational structure and behavior. Must be taken A-F. (Prerequisite: at least 90 credits completed or in progress)

Mgmt 3002 PSYCHOLOGY OF MANAGEMENT (2282)

10 lessons—\$245—4 degree credits—text price \$30—Wiseman

Development and application of behavior principles, methods, and skills that underlie managerial competencies in preventing and solving problems within and between individuals and groups, and aid in effective use of human resources. Projects and procedures are used to highlight concepts, methods, and skills, and to give practice in applying them to management problems. Must be taken A-F. **This course is now in preparation; please inquire before enrolling.**

Mgmt 3004 BUSINESS POLICY: STRATEGY FORMULATION AND IMPLEMENTATION (2281)

12 lessons—\$306.25 (plus texts)—5 degree credits—Majumdar

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 actions. Concepts and approaches to strategic planning are explored. These concepts, as well as the concepts, tools, and theories 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. Must be taken A-F. (Prerequisite: senior and completion of business core) **This course is now in preparation; please inquire before enrolling.**

Marketing (Management)

Also see Business Studies

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

Mktg 3000 PRINCIPLES OF MARKETING (2524)

12 lessons—\$245—4 degree credits—text price \$50—Sielaff

Basic policy and strategy issues in marketing and the environmental factors that affect these issues. Le-

Course Descriptions

gal, behavioral, ethical, competitive, economic, and technological factors that affect product, pricing, promotion, and marketing-channel decisions. Must be taken A-F. (Prerequisites: Econ 1002 or equivalent and at least 90 credits completed or in progress)

Mathematics (IT and GC)

It is essential that students have the prerequisite knowledge for each course, as well as credit for the courses listed as prerequisites. If there has been a time lapse since the previous course in mathematics, students should review thoroughly or repeat the prerequisite. It is impossible to make progress in mathematics without a sound knowledge of previous concepts and applications.

Note: In addition to the following noncredit courses in mathematics, certain courses available through the high school program of the Department of Independent Study also fulfill entrance requirements of I of T and other colleges. For Independent Study courses in high school mathematics, see the High School Courses section.

GC 0611 MATHEMATICS SKILLS REVIEW (7214)

12 lessons—\$213—no credit—text price \$40—L. Koch

An in-depth review of basic mathematics from whole numbers to geometry. Emphasis is on both computation and understanding the basic concepts. Ideal for students who plan to continue with elementary algebra.

GC 0621 ELEMENTARY ALGEBRA (7227)

9 lessons—\$213—no credit—text price \$40—Robertson

For students with a strong arithmetic background who are ready to study elementary algebra. Topics: signed numbers, algebraic expressions, equations, inequalities, rational expressions, exponents, polynomials, factoring, graphing, 2x2 systems, radical expressions, and quadratic equations and word problems from these areas. Prepares students for GC 0631, Intermediate Algebra Part II. (Prerequisite: knowledge of arithmetic or GC 0611 or GC 0615 or Math 0005) **This course is now in preparation; please inquire before enrolling.**

GC 0625 INTERMEDIATE ALGEBRA, PART I (7219)

10 lessons—\$213 (plus texts)—no credit—Ganguli

For students needing additional preparation in algebra before Intermediate Algebra Part II. Sets, real numbers, linear equalities, linear inequalities, absolute values, polynomials, rational expressions, exponents, roots, quadratic equations, relations and functions, systems of equations, word problems. (Prerequisite: GC 0621 or Math 0006)

GC 0631 INTERMEDIATE ALGEBRA, PART II (7205)

16 lessons—\$266.25—no credit—text price \$32—Giese

Concepts and manipulative skills of algebra necessary for student to compete in a college algebra course. Topics include: discussion of the real number system, special products and factoring, exponents and radicals, linear equations in one and two variables, quadratic equations in one variable, progressions, inequalities, variation, and logarithms. (Prerequisite: GC 0621 with a grade of B+ or better, or GC 0625 or 1445, or Math 0006)

Math 1008 TRIGONOMETRY (7218)

12 lessons—\$213—4 degree credits—text price \$42—calculator \$11—Varadachari

Analytic trigonometry, identities, equations, properties of functions; right and oblique triangles without logarithmic computations. Calculator with trig and inverse trig functions necessary. (Prerequisites: plane geometry, high school higher algebra, mathematics placement score)

Math 1111 COLLEGE ALGEBRA AND ANALYTIC GEOMETRY (7217)

18 lessons—\$266.25—5 degree credits—text price \$45—Ressler

Functions, graphs, quadratic equations, inequalities, complex numbers, theory of equations, permutations and combinations, probability, systems of equations, graphing linear and quadratic equations, eq-

Course Descriptions

conic and standard position, logarithms. (Prerequisite: plane geometry, 2 years high school algebra and mathematics placement score, or plane geometry and GC 0631)

Math 1142 SHORT CALCULUS (7240)

16 lessons—\$266.25—5 degree credits—text price \$56—Varadachari

For students in pre-business administration, pre-pharmacy, and others requiring a minimal amount of calculus; students who plan to take several quarters of mathematics should register for Math 1211-1221-1231. (Prerequisite: Math 1111 or mathematics placement score)

Math 1201 PRECALCULUS (7202)

16 lessons—\$266.25—5 degree credits—text price \$47—Gupta

Students study inequalities, analytical geometry, complex numbers, binomial theorem, mathematical induction, functions and graphs, trigonometric, exponential, and logarithmic functions. Intended for students who need to review high school higher algebra and trigonometry before taking a calculus sequence. (Prerequisite: GC 0631 or high school higher algebra, trigonometry, and mathematics placement score)

Math 1211 CALCULUS I (7224)

16 lessons—\$266.25—5 degree credits—text price \$47—Varadachari

Analytical geometry and calculus of functions of one variable. (Prerequisite: Math 1201 with a grade of C or better, or Math 1008 and 1111 with grades of C or better, or 4 years of high school math and math placement score)

Math 1211 CALCULUS I (V722)

Video Cassette Course—5 degree credits—\$266.25—text price \$47—study guide \$10—Reddy

Analytical geometry and calculus of functions of one variable, applications. (Prerequisite: Math 1201 with a grade C or better or Math 1111 and 1008 with grades of C or better, or 4 years high school math and math placement score) **Students view the cassettes at Walter Library, the Duluth Center, or on their Home VCR (see the blue section).**

Math 1221 CALCULUS II (7225)

16 lessons—\$266.25—5 degree credits—text price \$38—Varadachari

A continuation of Calculus I. (Prerequisite: grade of C or better in Math 1211)

Math 1231 CALCULUS III (7226)

16 lessons—\$266.25—5 degree credits—text price \$38—Varadachari

A continuation of Calculus II. Infinite series and power series. (Prerequisite: grade of C or better in Math 1221)

Math 3066 ELEMENTARY DIFFERENTIAL EQUATIONS (7296)

16 lessons—\$265—4 degree credits—text price \$45—Varadachari

Equations of first order, applications; linear equations with constant coefficients, Laplace transforms, simultaneous equations, and series solutions. (Prerequisite: Math 1231 with grade of C or better or equivalent)

Math 3211 MULTIVARIABLE CALCULUS (7237)

16 lessons—\$331.25—5 degree credits—text price \$38—Varadachari

Partial differentiation, chain rule, implicit functions, applications. Multiple integrals in two and three dimensions. (Prerequisite: Math 1231 with grade of C or better or equivalent)

Math 3221 INTRODUCTION TO LINEAR ALGEBRA AND LINEAR DIFFERENTIAL EQUATIONS (7236)

16 lessons—\$331.25—5 degree credits—text price \$45—Varadachari

Vectors, systems of linear equations, matrices, determinants, bases, eigenvalues. Linear differential equations and systems with constant coefficients, initial value problem and general solution, variation of parameters for inhomogeneous equations, applications. (Prerequisite: Math 1231 with grade of C or better or equivalent)

Mechanical Engineering (IT)

ME 1025 ENGINEERING GRAPHICS (3026)

12 lessons—\$213—4 degree credits—text and materials \$79—Berhe

Engineering representation in pictorial view and multiview; sketching techniques, size description, standard and simplified practices applied to graphical communication. Analysis of systems of projection; correlation of graphical and numerical solutions of space problems, intersections and development. (Prerequisite: Math 1211 or equivalent)

Music (CLA)

Mus 1531 THEORY I: FOUNDATIONS OF TONAL THEORY (7311.2)

11 lessons (90-minute cassettes)—\$159.75—3 degree credits—text price \$34—Vanderveide

An integrated course in music theory incorporating sight singing, spelling, writing, and aural dictation of melodic and harmonic patterns. Topics include notation, aural perception, playing of rhythms in simple and compound time, and the basic rules for four-voice part writing. Can be taken by music and music education majors (for whom it is required) and by high school students or adults who wish to augment their private music study, enhance their participation in a musical ensemble, or increase their understanding and listening enjoyment of music. Also offers a review of rudiments of music required of all elementary education majors. Much of the course material is on audio tapes rather than in the traditional written format. Must be taken concurrently with Mus 1511, for a total of 4 credits. (Prerequisite: Mus 1001 or equivalent)

Mus 1511 EAR TRAINING AND SIGHT SINGING I (7311.1)

11 lessons—\$53.25—1 degree credit—9 audio cassettes \$22.50—Vanderveide

See above. Must be taken concurrently with Mus 1531, for a total of 4 credits.

Mus 5702 AMERICAN MUSIC: TWENTIETH-CENTURY AMERICAN MUSIC (A731)

Audio Cassette Course—\$221—4 degree credits—text price \$30—study guide \$10—10 audio cassettes \$24.75—Riedel

Analysis of American music during this century: folk, popular and classical, black and Chicano, opera and symphony, contemporary music.

Mus 5950 TOPICS IN MUSIC: MUSIC APPRECIATION (A732)

Audio Cassette Course—\$221—4 degree credits—no required text—14 audio cassettes \$34—study guide \$10—Sutton

Analyzes music in the repertory of our culture—forms and styles from the 17th century to the present. Discusses the basic musical elements of rhythm, tonality, melody, and texture. The course is intended to increase the listener's musical vocabulary and skills in analyzing and appreciating musical forms such as: symphonies, concertos, chamber, keyboard and choral music, opera and song.

Mus 5950 TOPICS IN MUSIC: MUSIC APPRECIATION (K732)

10 lessons—\$221—4 degree credits—no required text—study guide \$10—Sutton

See above. **This course will be broadcast Winter 1991 on KUOM radio, 770 AM (see the blue section).**

Norwegian (CLA)

Nor 1101 BEGINNING NORWEGIAN I (6303)

16 lessons—\$266.25—5 degree credits—text price \$41—7 audio cassettes \$18—Mishler

A survey of Norwegian grammar, plus composition and the reading of easy prose.

Nor 1102 BEGINNING NORWEGIAN II (6304)

16 lessons—\$266.25—5 degree credits—text price \$47—5 audio cassettes \$13.75—Mishler

Continuation of Nor 1101, but with primary emphasis on reading and writing. Short stories and folk tales are used for reading assignments. (Prerequisite: Nor 1101 or equivalent)

Course Descriptions

Philosophy (CLA and GC)

Phil 1001 INTRODUCTION TO LOGIC (7608)

10 lessons—\$266.25—5 degree credits—text price \$33—Zanoni

Rules and procedures of sound argument and valid inference. Relationship of formal patterns of reasoning to such uses of ordinary language as argument, propaganda, and persuasion. How formal logic can be employed as a tool for critical thinking.

Phil 1002 INTRODUCTION TO PHILOSOPHY (7600)

15 lessons—\$266.25—5 degree credits—text price \$30—Bessie

Western philosophy is generally considered to have four main branches—epistemology, metaphysics, axiology, and logic. This course introduces students to the first three of these traditional areas of study. By considering specific problems from each branch, students learn both historical and contemporary methods for answering fundamental questions about the ultimate nature of reality.

GC 1355 PHILOSOPHY: PROBLEMS OF ETHICS (7606)

14 lessons—\$213—4 degree credits—text price \$19—Zanoni

The course aims at providing the student with an understanding of the development of moral thought in Western civilization and the problems generated by changing views about the nature of human beings and their behavior. The emphasis of the course is on showing how thinking clearly about the various factors in the development of moral thought in the West is relevant to contemporary moral practice.

GC 3352 PHILOSOPHY THROUGH LITERATURE

See English

Physical Medicine and Rehabilitation (Medical School)

PMed 5445 SOCIAL AND PSYCHOLOGICAL ASPECTS OF PHYSICAL DISABILITY (V466.1)

Video Cassette Course—\$401—4 degree credits—study guide \$10—text price \$67—Atheistan
See HSU 5008.

PMed 5445 SOCIAL AND PSYCHOLOGICAL ASPECTS OF PHYSICAL DISABILITY (T466.1)

10 lessons—\$401—4 degree credits—study guide \$10—text price \$67—Atheistan
See HSU 5008.

Physics (IT)

Phys 1001 THE PHYSICAL WORLD (7713)

22 lessons—\$213—4 degree credits—text price \$43—Cassola

Fundamental laws and principles of the physical world discussed in the context encountered in modern science and technology. Topics: motion of particles, laws of motion, momentum conservation, energy conservation, gravity, fluids, temperature, heat, wave motion, the nature of light, optics, electricity, electric circuits, and magnetism. No credit IT students. (Prerequisite: one year high school algebra)

Phys 1003 THE CHANGING PHYSICAL WORLD (V773)

Video Cassette Course—\$213—4 degree credits—text price \$23—study guide \$10—R. Jones

This course introduces the nonscientist to the changing world of twentieth-century physics. It will highlight, against a background of history and philosophy, the new ideas and discoveries of relativity, cosmology, and quantum theory as seen from the vast scale of stars and galaxies, through the everyday realm of matter and energy, to the submicroscopic level of atoms and nuclei. **Students view the cassettes at Walter Library, Duluth Center, Morris Center, or on their Home VCR (see the blue section).**

Phys 1041 INTRODUCTORY PHYSICS I (7741)

18 lessons—\$213—4 degree credits—text price \$49—Cassola

Primarily for students interested in a general, non-calculus physics course, but also for CLA distribution requirements. Topics include uniformly accelerated motion, Newton's laws of motion, work, energy, motion of rigid bodies, mechanical properties of matter, temperature, gas law, thermal properties of matter, thermodynamics, vibratory motion, wave motion, and sound. Replaces old Phys 1032. **Students who have completed Phys 1031 should take Phys 1041 to complete the series.** (Prerequisites: high school algebra, geometry, and trigonometry)

Course Descriptions

Phys 1042 INTRODUCTORY PHYSICS II (7742)

16 lessons—\$213—4 degree credits—text price \$49—Cassola
Second course in the series. Topics: electric fields, direct current circuits, magnetism, electromagnetic induction, alternating currents, electromagnetic waves, properties of light, optical devices, interference, diffraction, atomic structure, the atomic nucleus, and physics of the universe. Replaces old Phys 1031. (Prerequisite: Phys 1041 or equivalent)

Phys 1045 INTRODUCTORY PHYSICS LABORATORY I (7718)

8 experiments—\$53.25—1 degree credit—text price \$6—Cassola
Laboratory experiments offered in conjunction with Phys 1041. Experiments include graphical analysis of data, geometry of motion, gravitational field, energy, power, and sound waves. S-N grading only. (Prerequisite: Phys 1041 or equivalent, or concurrent registration)

Phys 1046 INTRODUCTORY PHYSICS LABORATORY II (7720)

6 experiments—\$53.25—1 degree credit—text price \$3 (plus materials)—Cassola
Laboratory experiments offered in conjunction with Phys 1042. Experiments: probability and statistics, direct current circuits, magnetic fields, optics, optical instruments, and diffraction. S-N grading only. (Prerequisite: Phys 1042 or equivalent, or concurrent registration)

Phys 1104 GENERAL PHYSICS (7733)

16 lessons—\$213—4 degree credits—text price \$54—Cassola
Primarily for premedical and biological science students. Topics covered include motion, Newton's laws, work and energy, momentum and the pressure of gases, mechanical properties of matter, temperature, thermal properties of matter, thermodynamics, sound, entropy. No credit for IT students. (Prerequisite: Math 1142 and high school trigonometry or Math 1008)

Phys 1105 GENERAL PHYSICS (7734)

15 lessons—\$213—4 degree credits—text price \$54—Cassola
Second course in the series. Topics covered include fluid statics, fluid dynamics, elastic properties of solids, vibration, traveling waves, standing waves, sound waves, reflection and refraction of light, optical instruments, interference, electric fields, and electrical energy. No credit for IT students. (Prerequisite: Phys 1104)

Phys 1106 GENERAL PHYSICS (7735)

14 lessons—\$213—4 degree credits—text price \$54—Cassola
Third course in the series. Topics covered include direct-current circuits, capacitors, magnetic fields and forces, alternating-current circuits, special relativity, wave-particle duality, Bohr model of the atom, quantum mechanics, nuclear physics, and elementary particle physics. No credit for IT students. (Prerequisite: Phys 1105)

Phys 1271 GENERAL PHYSICS (7709)

16 lessons—\$213—4 degree credits—text price \$51—Cassola
Calculus-level general physics course. Topics covered include vectors, motion of a particle in one and two dimensions, particle dynamics, conservation of energy, conservation of momentum, collisions, rotational kinematics and dynamics, conservation of angular momentum, equilibrium of rigid bodies, oscillations, and gravitation. (Prerequisite: completion of or concurrent registration in introductory calculus course)

Phys 1281 GENERAL PHYSICS (7710)

16 lessons—\$213—4 degree credits—text price \$51—Cassola
Calculus-level general physics course. Topics covered include fluid statics and dynamics, waves in elastic media, sound, heat, and thermodynamics, kinetic theory of gases, electrostatics, capacitance and dielectrics, and electric circuits. (Prerequisites: Physics 1271 or equivalent, and completion of or concurrent registration in an introductory calculus course).

Phys 1291 GENERAL PHYSICS (7711)

16 lessons—\$213—4 degree credits—text price \$51—Cassola
Calculus-level general physics course. Topics covered include the magnetic field, Ampere's Law, Faraday's law of induction, inductance, magnetic properties of matter, electromagnetic oscillations, alternating currents, Maxwell's equations, electromagnetic waves, nature and propagation of light, reflection and refraction of plane and spherical waves, interference, diffraction, gratings and spectra, polarization, light and quantum physics, waves and particles. (Prerequisites: completion of or concurrent registration in introductory calculus course, Phys 1281 or equivalent)

Course Descriptions

Phys 3501 MODERN PHYSICS (7704)

17 lessons—\$265—4 degree credits—text price \$57—Cassola

Descriptive course in modern physics. Topics: quantum mechanics, hydrogen atom, multielectron atoms, molecular structure, quantum statistics, thermal radiation, solid state physics, nuclear physics. (Prerequisite: Physics 1291 or 1106)

Political Science (CLA)

Pol 1001 AMERICAN GOVERNMENT AND POLITICS (7903)

18 lessons—\$266.25—5 degree credits—text price \$62—Maltzman

Analysis of principles and processes of national, state, and local government in the United States. The relationships of political forces and philosophies. Topics include: the Constitution, civil liberties, public opinion, interest groups and political parties, Congress, the judiciary and the presidency.

Pol 1041 CONTEMPORARY POLITICAL IDEOLOGIES (T796)

10 lessons—\$213 (plus texts)—4 degree credits—study guide \$10—Ball

A systematic survey of the major competing ideologies of the 20th century, including communism, conservatism, liberalism, fascism, "liberation" and "green" ideologies, and others. Special emphasis is placed on the historical sources, philosophical foundations, and argumentative structure of these influential ideologies. **This course will be broadcast Winter 1991 on KTCI-TV (Channel 17) and KWCM-TV (Channel 10) (see the blue section).**

Pol 1041 CONTEMPORARY POLITICAL IDEOLOGIES (V796)

Video Cassette Course—\$213 (plus texts)—4 degree credits—study guide \$10—Ball

See above. **Students view the cassettes at Walter Library or on their Home VCR (see the blue section).**

Pol 3308 THE UNITED STATES CONGRESS (7932)

14 lessons—\$221—4 degree credits—text price \$47—Maltzman

Internal organization, committee system, party leadership, norms, recruitment; legislative policymaking; relationship with the president and bureaucracy; interest group, political party, and constituency influences on the congressional process.

Pol 3810 TOPICS IN INTERNATIONAL POLITICS AND FOREIGN POLICY: UNDERSTANDING WAR: ITS CAUSES AND CONSEQUENCES (7929)

10 lessons—\$221—4 degree credits—text price \$81—study guide \$10—Sumstine

Normative issues surrounding international violence; causes of violence and mechanisms for creating international peace; alternative structures for limiting future violence and maintaining peace.

Pol 5471 GOVERNMENT AND POLITICS OF THE SOVIET UNION (7955)

12 lessons—\$221—4 degree credits—text price \$80—N. Noonan

Analysis of politics in the USSR, including the Soviet political heritage, the impact of Marxism-Leninism, principal institutions, historical developments since 1917, Soviet foreign policy, political elites, the decision-making process, political socialization, Perestroika, and selected economic and political issues.

Pol 5473 CHINESE GOVERNMENT AND POLITICS (7954)

12 lessons—\$221—4 degree credits—text price \$42—Dodge

An exploration of China since the Communist revolution and Chinese political shifts from 1950 to 1980; their attempts at modernization, achieving a high quality of life for the Chinese people, and achieving a major role in international politics. Topics: Chinese political ideology, developmental policies and plans, the political and economic impact of developmental plans, and the contemporary Chinese international role. (Prerequisite: 12 credits in social sciences or consent of instructor)

Pol 5737 AMERICAN POLITICAL PARTIES (7987)

14 lessons—\$221—4 degree credits—text price \$33—Healy

Party activities in the United States—recruiting, nominating, and campaigning. Parties in power. Party organization and membership, party identification, third parties, and independents. Party reform and the functions of parties. Attention throughout to the impact of parties on democratic government. (Prerequisite: Pol 1001 or consent of instructor)

Course Descriptions

Portuguese (CLA)

Port 3970 DIRECTED STUDIES: THE EVERPRESENT PAST IN SPANISH AND PORTUGUESE CULTURE (A684)

Audio Cassette Course—\$221—4 degree credits—study guide \$10—11 audio cassettes \$27—Sousa

See SpPt 3610 (Spanish). **Most readings will be in the original language.** Texts are on reserve at Wilson Library, Minneapolis campus. Must be Portuguese major.

Psychology (CLA)

Also see Child Psychology

Psy 1001 INTRODUCTION TO PSYCHOLOGY (8104)

20 lessons—\$266.25—5 degree credits—text price \$47—Weiss

Introduction to the study of human behavior. Prerequisite for all advanced courses in psychology. Topics include biological foundations of behavior; learning and memory; cognition, thinking, language and social development; individual differences and measurement; and personality, psychopathology, and psychotherapy.

Psy 3101 INTRODUCTION TO PERSONALITY (8188)

12-14 lessons—\$221—4 degree credits—text price \$42—Meadow

This course is a basic introduction to the study of personality. It will discuss major theories, personality development, empirical research, personality assessment, and several selected topics in the field of personality. (Prerequisite: Psy 1001)

Psy 3604 INTRODUCTION TO ABNORMAL PSYCHOLOGY (8197)

14 lessons—\$221—4 degree credits—text price \$49—Weiszhaar

Focuses on the theoretical causes of human behavior, the description of behavioral disorders, the etiologies of behavioral disorders, and treatment alternatives. (Prerequisite: Psy 1001) **Students may not receive credit for both Psy 3604 and Psy 5604.**

Psy 3911 PSYCHOLOGY OF RELIGION (8196)

12-14 lessons—\$221—4 degree credits—text price \$35—Meadow

This course is a basic introduction to the psychology of religion. It discusses religious variables such as conversion and prayer in psychological perspective, and such psychological variables as belief and conscience in religious perspective. In addition, religion development, measurement of religiousness, and the mental health implications of religion are explored. (Prerequisite: Psy 1001 or consent of instructor)

Psy 3970 DIRECTED STUDIES: STRESS MANAGEMENT (8198)

12 lessons—\$221—4 degree credits—text price \$37—1 audio cassette \$6—Weiszhaar

The concept of stress, various ways of measuring stress levels, the concept of coping, and various methods of coping. Information will be incorporated from diverse medical and psychological research to show how the brain, beliefs, moods, and thoughts affect one's physical and psychological well-being. Specific techniques for dealing with stress directly and for health maintenance. Appropriate for health-care providers dealing with patients with stress-related problems, or for individuals suffering from stress who want to understand the problem.

Soc 5201 INTRODUCTION TO SOCIAL PSYCHOLOGY

See Sociology

Public Affairs (Humphrey Institute)

PA 5810 DEVELOPMENT ADMINISTRATION (4570)

12 lessons—\$221—4 degree credits—text price \$28—Warp

Problems and issues in development, the aid relationship, manpower for development, administrative reform, the regional approach, public enterprise, and case studies.

Course Descriptions

Public Health (Public Health)

Also see Veterinary Medicine

PubH 5609 TOWARD AN UNDERSTANDING OF CHILD SEXUAL ABUSE (T467)

10 lessons—\$291—4 degree credits—text price \$34—study guide \$10—ten Bensel and Roland

The 10 programs of this course will deal with a historical understanding of child sexual abuse, including definitions, dynamics, effects on the victim, how society intervenes, and prevention methods. This course is aimed at the professional in public health, health sciences, social work, education, and law. **This course will be broadcast Spring 1991 on KTCI-TV (Channel 17) (see the blue section).**

PubH 5609 TOWARD AN UNDERSTANDING OF CHILD SEXUAL ABUSE (V467)

Video Cassette Course—\$291—4 degree credits—text price \$34—study guide \$10—ten Bensel and Roland

See above. **Students view the cassettes at Walter Library or on their Home VCR (see the blue section).**

PubH 5642 CHILD ABUSE AND NEGLECT (V465)

Video Cassette Course—\$218.25—3 degree credits—text price \$19—study guide \$10—ten Bensel and Roland

This course is a survey of the basic concepts and knowledge of child abuse and neglect. It includes a historical overview and the issue of balance of rights between children and their parents. Examples of child abuse and neglect, understanding why it occurs, its consequences, and how society can intervene and prevent it is presented. **Students view the cassettes at Walter Library, Duluth Center, or Morris Learning Center, or on their Home VCR (see the blue section).**

Religion

See American Studies; Classics; Humanities; Philosophy; Psychology

Religious Studies (CLA)

ReIS 1031 RELIGIONS OF SOUTH ASIA (5523)

13 lessons—\$213—4 degree credits—text price \$55—Malandra

Introduction to Hinduism, Buddhism, and Jainism. **This course is now in preparation; please inquire before enrolling.**

ReIS 1032 RELIGIONS OF EAST ASIA (5521.1)

12 lessons—\$213—4 degree credits—text price \$52—Ditmanson

An introduction to the religious traditions of China and Japan—Confucianism, Taoism, Buddhism, Shinto, and folk religion—as they historically developed and as they are practiced today. An effort is made to seek the basic assumptions underlying each tradition and the value systems involved in each tradition. **Students may not receive credit for both ReIS 1032 and EAS 1032.**

ReIS 1034/3034 INTRODUCTION TO JUDAISM (V552/V553)

Video Cassette Course—\$213/\$221—4 degree credits—text price \$30—Zahavy

See JwSt 1034/3034.

Rhetoric (Agriculture)

Rhet 1147 EFFICIENT READING

See Study Skills

Rhet 3562 WRITING IN YOUR PROFESSION (3950)

10 lessons—\$276 (plus texts)—4 degree credits—Gidmark

The course presupposes solid competence in basic composition skills and allows each student to develop individualized, professionally-written projects. The relationship between structuring information to meet the needs of particular readers and writing effectively is stressed. Assignments include the proposal, memorandum, letter of application, resume, and a substantial research report. (Prerequisites: freshman communication requirement, Rhet 1151, junior status)

Russian (CLA)

Russ 1101 BEGINNING RUSSIAN I (6603)

17 lessons—\$266.25—5 degree credits—text price \$43—4 audio cassettes \$11.50—Prokopov
Provides a reading and writing knowledge of the Russian language. Acquaints students with Russian script, pronunciation, and essentials of grammar; translations from Russian and into Russian.

Russ 1102 BEGINNING RUSSIAN II (6604)

17 lessons—\$266.25—5 degree credits—text price \$43—5 audio cassettes \$13.75—Prokopov
Second part of the Beginning Russian sequence: reading, writing, pronunciation, and grammar. (Prerequisite: Russ 1101)

Russ 1103 BEGINNING RUSSIAN III (6605)

17 lessons—\$266.25—5 degree credits—text price \$43—5 audio cassettes \$13.75—Prokopov
Third part of the Beginning Russian sequence: reading, writing, pronunciation, and completion of the study of Russian grammar. Poetry reading. (Prerequisite: Russ 1102)

Russ 3421 RUSSIAN LITERATURE: MIDDLE AGES TO DOSTOEVSKY (6650)

9 lessons—\$221 (plus texts)—4 degree credits—Jahn
The history of Russian literature from its beginning (about A.D. 1000) to the middle of the 19th century. Covers the well-known writers of the 19th century: Pushkin, Gogol, and Dostoevsky. Students will read both literary works (in English) and scholarly materials (historical, biographical, critical commentary). Assignments include one extended interpretive essay or research paper. **This course is now in preparation; please inquire before enrolling.**

Russ 3422 RUSSIAN LITERATURE: TOLSTOY TO PRESENT (6651)

12 lessons—\$221 (plus texts)—4 degree credits—Kulesov
Introductory study of literary movements represented by well-known Russian writers and their selected works from the second half of the 19th century to the present. Student will read both literary works (in English) and scholarly material (historical, biographical, critical commentary). Assignments include four interpretive essays and a number of optional writings about the works read. **This course is now in preparation; please inquire before enrolling.**

Scandinavian (CLA)

Also see Norwegian; Swedish

Scan 3602 THE SCANDINAVIAN FAIRY TALE AS LITERATURE (A631)

Audio Cassette Course—\$221—4 degree credits—text price \$16—study guide \$10—10 audio cassettes \$24.75—Mishler
An exploration of Hans Christian Andersen's stories and tales (in English).

Slavic and East European Languages

See Russian

Social Studies (GC)

GC 1283 PSYCHOLOGY OF HUMAN DEVELOPMENT (4108)

11 lessons—\$213—4 degree credits—text price \$39—Latts
The growth and development of an individual from conception through old age is explored. Aspects of development emphasized include physical, motor, social, emotional, and psychological growth. Integration of facets of development is made in order to understand a human being as a complex organism functioning in a complex environment.

Course Descriptions

Social Work (Home Economics)

Also see Social Studies

SW 1001 INTRODUCTION TO AMERICAN SOCIAL WELFARE AND COMMUNITY SERVICES (8692)

16 lessons—\$266.25—5 degree credits—text price \$47—Hoshino

Survey of social services and their components, including many fields of practice, multiple auspices and dependencies; numerous levels of participation, differing ideologies and methods of approach to social problems, and the dynamics of change from social movements to institutionalizations inherent in American social service delivery systems. Course is primarily about the "frames of reference" within which help is offered in American social services, public and private. The uneasy relationship between social service policies and professional social work practice. This course is equivalent to the regular course offered to on-campus students within the BA in Social Welfare Program. Course is seen as prerequisite for practice methods courses.

SW 5010 SEMINAR: SPECIAL TOPICS—TOWARD AN UNDERSTANDING OF CHILD SEXUAL ABUSE (T467.1)

10 lessons—\$276—4 degree credits—text price \$34—study guide \$10—ten Benseal and Roland

See PubH 5609. Students may not receive credit for both PubH 5609 and SW 5010.

SW 5010 SEMINAR: SPECIAL TOPICS—TOWARD AN UNDERSTANDING OF CHILD SEXUAL ABUSE (V467.1)

Video Cassette Course—\$276—4 degree credits—text price \$34—study guide \$10—ten Benseal and Roland

See PubH 5609. Students view the cassettes at Walter Library or on their Home VCR (see the blue section).

Sociology (CLA and GC)

Soc 1001 INTRODUCTION TO SOCIOLOGY (8605)

13 lessons—\$213—4 degree credits—text price \$34—Magnuson-Martinson

A general introduction to the sociological analysis of social processes and social structure. Topics include: socialization, stratification, and social inequality; deviance and social control; and social change. General theoretical perspectives and research methods are discussed. Emphasis is placed on the application of concepts and theories to everyday life.

Soc 1002 AMERICAN COMMUNITY (8604)

12 lessons—\$213—4 degree credits—text price \$34—Christoforides

This course is intended to give students an opportunity to engage in an in-depth analysis of American urban life. By looking at such phenomena as the distribution of population, urban-rural differences, social factors in business systems, occupational groups, determination of social status, and minority group adjustment, American Community attempts to answer the questions: Is there an American "community," "culture," "value system," "way of life"?

Soc 3101 INTRODUCTION TO AMERICAN CRIMINAL JUSTICE (A866)

Audio Cassette Course—\$221—4 degree credits—text price \$42—study guide \$10—10 audio cassettes \$24.75—Samaha

Policies and issues in American criminal justice. Focuses on problems in police, prosecution, courts, jails, prisons, and alternatives to incarceration. Includes such topics as domestic violence, plea bargaining, bail, prison crowding, career criminals, purposes of punishment, the death penalty and police patrol.

Soc 3501 THE FAMILY SYSTEM (8675)

6 lessons—\$221—4 degree credits—text price \$44—Hwang

The family in contemporary American society with 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. (Prerequisite: Soc 1001 or consent of instructor)

Course Descriptions

Soc 3551 WORLD POPULATION PROBLEMS (8672)

14 lessons—\$221—4 degree credits—text price \$53—Tavakoli

This course examines the causes and consequences of rapid human population growth. Optimistic and pessimistic opinions about the balance between population and resources are examined, as are policy options that exist to manipulate future population growth. Other topics include population growth and economic development, world food shortages, industrialization and urbanization, the feminist movement, and population policies. The scope of the course is world wide, the view comparative, and the emphasis on improving students' ability to interpret current and future everyday events in light of population dynamics.

Soc 5201 INTRODUCTION TO SOCIAL PSYCHOLOGY (8676)

13 lessons—\$221—4 degree credits—text price \$32—Magnuson-Martin

An intensive examination of the major issues in social psychology. Covers substantive areas of self, personality, person perception, interpersonal attraction, attitudes, social influence, prosocial behavior and aggression, small groups, and collective behavior. Emphasis will be placed on application of theories and concepts to everyday life. Four major theoretical perspectives (symbolic interactionism, exchange, social learning, and cognitive consistency) are used to organize course material. Sociology majors may not receive credit for this course. (Prerequisite: 8 credits in Sociology, Anthropology, Psychology, Political Science, or Economics) **This course is now in preparation; please inquire before enrolling.**

Soc 5701 ANALYTICAL SOCIAL THEORY (8684)

11 lessons—\$221—4 degree credits—text price \$46—Christoforides

An introduction to the various ways sociologists have sought to explain social phenomena. Emphasis is on contemporary social theory, with some historical background. The sociological theories discussed include functionalism, conflict, exchange, symbolic interactionism, role, interactionist approaches, phenomenology, and ethnomethodology. (Prerequisite: 8 credits in social science or consent of instructor)

Soc 5960 TOPICS IN SOCIOLOGY: DEATH AND DYING (8691)

15 lessons—\$221—4 degree credits—text price \$18—study guide \$5—Owen

Death and Dying explores the issues and problems that mortality presents to modern American society. Topics include the dying patient, grief, the funeral, death and the child, youth and suicide, the role of caregiving professions, moral and ethical issues surrounding death, and life after death. (Prerequisite: Soc 1001)

GC 1211 PEOPLE AND PROBLEMS (8693)

\$266.25 (plus texts)—5 degree credits—Thoen

Interdisciplinary, cross-cultural study of major political and economic problems of human society. Problems such as employment, inflation, energy, pollution, war, and distribution of power are examined from social sciences perspective. **This course is now in preparation; please inquire before enrolling.**

Spanish (CLA)

Span 0221 READING SPANISH (6817)

16 lessons—\$213—no credit—text price \$32—Tan

Prepares students primarily for reading, and especially for reading general and technical nonliterary prose. The department will certify to the Graduate School a reading knowledge of Spanish upon successful completion of the final examination. S-N grading only.

Span 1101 BEGINNING SPANISH I (6806)

13 lessons—\$266.25—5 degree credits—text price \$67—8 audio cassettes \$20.25—Tan

Fundamentals of Spanish. Students develop listening and speaking skills by means of tapes, and learn to read and write basic Spanish in the cultural context of Spain and Spanish America.

Span 1102 BEGINNING SPANISH II (6807)

15 lessons—\$266.25—5 degree credits—text price \$65—7 audio cassettes \$18—Tan

Continuation of Span 1101. (Prerequisite: Span 1101 or equivalent)

Span 1103 BEGINNING SPANISH III (6808)

15 lessons—\$266.25—5 degree credits—text price \$65—7 audio cassettes \$18—Tan

Continuation of Span 1102. (Prerequisite: Span 1102 or equivalent)

Course Descriptions

Span 1104 INTERMEDIATE SPANISH I (6809)

10 lessons—\$266.25—5 degree credits—text price \$69—5 audio cassettes \$13.75—Tan
Speaking and comprehension; development of reading and writing skills based on materials from Spain and Spanish America. Grammar review; compositions. (Prerequisite: Span 1103 or equivalent)

Span 1105 INTERMEDIATE SPANISH II (6810)

10 lessons—\$266.25—5 degree credits—text price \$69—5 audio cassettes \$13.75—Tan
Continuation of Span 1104. (Prerequisite: Span 1104 or equivalent)

Span 1502 CULTURES AND CIVILIZATIONS OF LATIN AMERICA: INDIAN, EUROPEAN-COLONIAL, AFRICAN ROOTS (6843)

14 lessons—\$213—4 degree credits—text price \$21—Jara

Provides an opportunity to study and evaluate the cultures and civilizations of Latin America from pre-Columbian times, through the discovery of America by the Spaniards and their consequent explorations, conquest and colonization (15th to 18th centuries), to the movements of independence from Spain, Portugal, and France in the first quarter of the 19th century. It is intended to illuminate the problems and revolutionary changes of modern Latin America, which are a part of its complementary course, Span 1503. Readings in English. Knowledge of Spanish not necessary. Not to be used for Spanish or Portuguese major credit.

SpPt 3610 TOPICS IN SPANISH-PORTUGUESE CIVILIZATION AND CULTURE (A682)

Audio Cassette Course—\$221—4 degree credits—text price \$34—11 audio cassettes \$27—study guide \$10—Sousa

The course investigates how the concept of "regenerationism" has retained and exerted cultural force in the Iberian nations, forming a part of their cultural systems—and how it continues to exert that force today. Course materials chronologically structured around the development of the notion that, in Spain and Portugal, there are no beginnings—only "re-beginnings." Selections from literature, philosophy, and social commentary illustrate this sense of a lost past of imperial greatness and the need to recreate it. The survey begins with the Portuguese poet Luis de Camoes' epic poem of 1578 and ends with documents about the Spanish "nationalities" of the post-Franco era. Readings in translation.

Span 3970 DIRECTED STUDIES: THE EVERPRESENT PAST IN SPANISH AND PORTUGUESE CULTURE (A683)

Audio Cassette Course—\$221—4 degree credits—study guide \$10—11 audio cassettes \$27—Sousa

See above. **Most readings will be in the original language.** Texts are on reserve at Wilson Library, Minneapolis campus. Must be Spanish major.

Statistics (CLA)

Stat 1001 INTRODUCTION TO IDEAS OF STATISTICS (7272)

12 lessons—\$213 (plus texts)—4 degree credits—Berry

Learning under uncertainty; using probabilities to describe uncertainty; making inferences about causality using sample information; comparing treatments; correlation; estimating; predicting; testing hypotheses. Applications in business decision making, sports, medicine, and in the physical and social sciences. (Prerequisite: high school algebra) **This course is now in preparation; please inquire before enrolling.**

Study Skills (GC and Agriculture)

GC 1085 HOW TO STUDY (3802)

8 lessons—\$106.50—2 degree credits—text price \$36—2 audio cassettes \$6.75—Baldwin

Guided practice in developing an efficient approach to studying, founded on research in human learning. Using this background, students are taught to develop their concentration, improve their listening and note taking by using audio tapes, schedule their time effectively for study, prepare for and take exams, and prepare research papers. The course stresses practice in all the above skills, as well as in rapid reading, vocabulary development, effective underlining. (This course does not count as part of the 180-credit degree requirement at the University of Minnesota. However, grades are included in the overall GPA.)

Course Descriptions

Rhet 1147 EFFICIENT READING (3949)

9 lessons—\$213—4 degree credits—texts and tapes \$127—Gore

Designed to increase reading rate, comprehension, and vocabulary. Includes the use of cassette tapes for instruction and pacing activities. Useful for anyone who wants to achieve and maintain superior reading improvement. Not a remedial course. Beneficial for executive training.

Swedish (CLA)

Swed 1101 BEGINNING SWEDISH I (6900)

15 lessons—\$266.25—5 degree credits—text price \$79—4 audio cassettes \$11.50—Thander

An introduction to written and spoken Swedish through basic grammar, workbook exercises, and easy composition. Vocabulary useful to everyday situations is covered.

Swed 1102 BEGINNING SWEDISH II (6902)

20 lessons—\$266.25—5 degree credits—text price \$79—2 audio cassettes \$6.75—Thander

Continuation of Swed 1101. (Prerequisite: Swed 1101).

Swed 1103 BEGINNING SWEDISH III (6903)

19 lessons—\$266.25—5 degree credits—text price \$79—1 audio cassette \$3.50—Thander

Continuation of Swed 1102. (Prerequisite: Swed 1102).

Swed 1104 INTERMEDIATE SWEDISH I (6904)

21 lessons—\$266.25—5 degree credits—text price \$79—1 audio cassette \$3.50—Thander

Continued development of reading and writing skills in Swedish. (Prerequisite: Swed 1103)

Swed 1105 INTERMEDIATE SWEDISH II (6905)

16 lessons—\$266.25—5 degree credits—text price \$94—4 audio cassettes \$11.50—Thander

Continued development of reading and writing skills in Swedish. (Prerequisite: Swed 1104)

Textiles and Clothing (Home Economics)

TexC 1641 INTRODUCTION TO RETAIL MERCHANDISING (2004)

10 lessons—\$159.75—3 degree credits—Peterson

General aspects of retailing, including types of retailers, market research, management, buying, promotion, and trends. Concentrates on retailing careers within the structure of existing retail firms and distinguishes between department, discount, and specialty store retailing. **This course is now in preparation; please inquire before enrolling.**

TexC 1642 SEMINAR: INTRODUCTION TO RETAIL MARKETING (2205)

3 lessons—\$53.25—1 degree credits—no required texts—Peterson

An experiential, field-based course designed to interact with TexC 1641; consists of interviews with people engaged in various retailing careers. **This course is now in preparation; please inquire before enrolling.**

Theatre Arts (CLA)

Th 1101 INTRODUCTION TO THE THEATRE (V406)

Video Cassette Course—\$213 (plus texts)—4 degree credits—Ballet

History and theory of plays and playwrights. **Students view the cassettes at Walter Library or on their Home VCR (see the blue section). This course is now in preparation; please inquire before enrolling.**

Course Descriptions

Th 5115 PLAYWRITING (A405)

Audio Cassette Course—\$221—4 degree credits—text price \$30—10 audio cassettes \$24.75—study guide \$10—Nolte

Techniques of playwriting are explored in detail by students with some playwriting competence. The craft of writing a well-made play and experimentation in more modern styles are examined in the context of each student working toward the completion of a one-act or full-length play. (Prerequisite: Th 1321 or consent of instructor)

Th 5186 HISTORY OF THE AMERICAN THEATRE (A401)

Audio Cassette Course—\$221—4 degree credits—text price \$49—11 audio cassettes \$27—study guide \$10—Nolte

Examines the theatre from colonial days to the present as a mirror of our society. Playwrights, performers, and productions are seen in the context of our cultural, social, and political life.

Veterinary Medicine (Veterinary Medicine)

CVM 3100 PERSPECTIVES: INTERRELATIONSHIPS OF PEOPLE AND ANIMALS IN SOCIETY TODAY (A461)

Audio Cassette Course—\$194—2 degree credits—text price \$31—study guide \$10—10 audio cassettes \$24.75—Quigley and Robinson

Explores the interrelationships of people and animals in society today from different perspectives. Topics include: the human-animal bond; animal awareness; animal rights and human morality; humaneness; pets, pet behavior, and pet-facilitated therapy.

Women's Studies (CLA)

WS 1990 NORTHERN MINNESOTA WOMEN: MYTHS AND REALITIES (A882) (U of M Duluth)

Audio Cassette Course—\$159.75—3 degree credits—text price \$32—study guide \$20—10 audio cassettes \$24.75—R. E. Martin

This course examines the stereotypes and realities of life for Northern Minnesota Indian, Yankee, and immigrant women from the times of early settlement to the present day. See General Information section, Duluth Credit.

WoSt 3910 TOPICS IN WOMEN'S STUDIES: WOMEN BETWEEN VICTORIANISM AND EMANCIPATION (8821)

6 lessons—\$221—4 degree credits—text price \$39—Mouton

This course will explore continuity and change in the history of Anglo-American women from the late Victorian era to the present. Topics: the Victorian legacy, women and work, women's education, female sexuality, reproduction, and women and politics.

Media-Assisted Courses

Because some courses can be more interesting and intellectually stimulating with a visual or audio component, Independent Study offers several kinds of media-assisted courses. These include radio, television, audio cassette, video cassette, and Home Video courses.

Our radio and television courses, which are offered with the cooperation of University Media Resources, public radio stations, and public television stations, are broadcast each quarter of the academic year. After one of these degree-credit courses has been broadcast, it is converted to an audio cassette or a video cassette course so that students may continue to enroll in it.

Each media-assisted course consists of the media component, a course study guide, and texts. The study guide integrates all of the course components—it details the reading assignments from the required texts, gives the viewing or listening assignments, and contains study notes, written assignments, and/or exam information. The media component highlights the major themes of the course and helps pace student work. Instructor feedback usually occurs through comments and grades on the written assignments; instructors for some media-assisted courses maintain telephone office hours (given in the course study guide). All course assignments and exams for media-assisted courses can be completed by mail.

The broadcast schedule for this year's radio and television courses, plus information specific to each type of course, is given below. Most radio and television courses follow the University's quarter schedule. Students, however, may take up to one year to complete the course requirements. Information about our audio cassette, video cassette, and Home Video courses is given on the next pages. Descriptions of all of these courses are given in the Course Descriptions section of this bulletin.

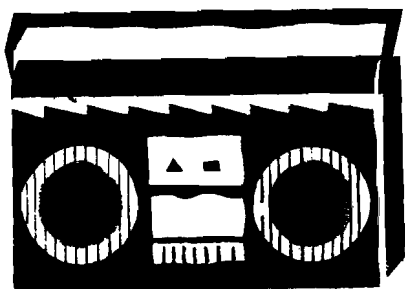
Radio and Television Courses

The radio and television courses we offer are listed below according to University quarter. Descriptions of these courses can be found in the Course Descriptions section of this bulletin, arranged alphabetically by department. Some upper-division television courses are available for graduate credit.

Radio Stations

Twin Cities: KUOM Radio, 770 AM
Duluth: KUMD Radio, 103.3 FM

New courses offered on weekdays over KUOM radio take advantage of KUOM's call-in format. Students and other listeners will be able to telephone the station and ask questions of the instructor and receive prompt and personal feedback. The call-in feature is not available for Saturday repeats or other Saturday courses.



Television Stations

Twin Cities: KTCI-TV, Channel 17
Appleton: KWCM-TV, Channel 10
Duluth: WDSE-TV, Channel 8
Austin: KSMQ-TV, Channel 15

If You Miss a Program

You can go to the following University of Minnesota locations to view or listen to a tape of a program. Please call ahead to check tape availability and open hours.

Twin Cities: Learning Resources Center
15 Walter Library
Minneapolis campus
612/624-1584

Duluth: Learning Resources Center
248 Library
Duluth campus
218/726-6121

Morris: Morris Learning Center
232 Community Services Building
Morris campus
612/589-2211, ext. 6456

Rochester: Rochester Center
1200 South Broadway
Rochester, MN
507/288-4584

Fall 1990

Registration dates: August 27-October 19

(If you are registering for a course broadcast in Duluth, you may register starting August 8.)

Radio courses

Introduction to African Literature, Afro 3601

KUOM: Wednesdays, 2-3 p.m., Sept. 26-Dec. 5

(repeats) Saturdays, 12-1 p.m., Sept. 29-Dec. 8

(No broadcasts Thanksgiving week)

Intermediate Poetry Writing, EngW 3103

(See English, Creative and Professional Writing)

KUOM: Saturdays, 1-2 p.m., Sept. 29-Dec. 8

(No broadcasts Thanksgiving week)

KUMD: Saturdays, 6-7 a.m., Sept. 8-Nov. 10

Television courses

Inventing the Future: Living, Learning, and Working in the 1990s, EdPA 5099

(See Education, Educational Policy and Administration)

KTCI: Mondays, 9-9:30 p.m., Sept. 24-Nov. 26

(repeats) Tuesdays, 5-5:30 p.m., Sept. 25-Nov. 27

KWCM: Tuesdays, 7-7:30 a.m., Sept. 25-Nov. 27

Family Relationships, FSoS 5200

KTCI: Mondays, 9:30-10 p.m., Sept. 24-Nov. 26

(repeats) Tuesdays, 5:30-6 p.m., Sept. 25-Nov. 27

KWCM: Thursdays, 7-7:30 a.m., Sept. 27-Nov. 29

KSMQ: Wednesdays, 5:30-6 p.m., Sept. 26-Nov. 28

(repeats) Thursdays, 2:30-3 p.m., Sept. 27-Nov. 29

WDSE: Wednesdays, 6:15-6:45 a.m., Sept. 5-Nov. 7

(repeats) Saturdays, 7:30-8 a.m., Sept. 8-Nov. 10

Social and Psychological Aspects of Physical Disability, HSU 5008/PMed 5445

KTCI: Tuesdays, 9-9:30 p.m., Sept. 25-Nov. 27

(repeats) Wednesdays, 9-9:30 p.m., Sept. 26-Nov. 28

The Nature of Human Language, Ling 1001

KTCI: Tuesdays, 9:30-10 p.m., Sept. 25-Nov. 27

(repeats) Wednesdays, 9:30-10 p.m., Sept. 26-Nov. 28

Winter 1991

Registration dates: December 3-February 1

(If you are registering for a course broadcast in Duluth, you may register starting November 7.)

Radio courses

Survey of American Literature, 1900-1945, Engl 3413

KUOM: Wednesdays, 2-3 p.m., Jan. 9-Mar. 13

(repeats) Saturdays, 12-1 p.m., Jan. 12-Mar. 16

Music Appreciation, Mus 5950

KUOM: Saturdays, 1-2 p.m., Jan. 12-Mar. 16

Roman Realities: Life and Thought in the Roman Empire, Class 3970

KUMD: Saturdays, 6-7 a.m., Dec. 8-Feb. 9

Television courses

Education of the Gifted and Talented, EPsy 5690

KTCl: Mondays, 9-9:30 p.m., Jan. 7-Mar. 11

(repeats) Tuesdays, 5-5:30 p.m., Jan. 8-Mar. 12

KWCM: Tuesdays, 7-7:30 a.m., Jan. 8-Mar. 12

KSMQ: Wednesdays, 5:30-6 p.m., Jan. 9-Mar. 13

(repeats) Thursdays, 2:30-3 p.m., Jan. 10-Mar. 14

WDSE: Wednesdays, 6:15-6:45 a.m., Dec. 5-Feb. 6

(repeats) Saturdays, 7:30-8 a.m., Dec. 8-Feb. 9

Second Language Programs for Young Children: Like Child's Play, Elem 5321

KTCl: Mondays, 9:30-10 p.m., Jan. 7-Mar. 11

(repeats) Tuesdays, 5:30-6 p.m., Jan. 8-Mar. 12

Introduction to Technical and Business Communication, Comp 1031

KTCl: Tuesdays, 9-9:30 p.m., Jan. 8-Mar. 12

(repeats) Wednesdays, 9-9:30 p.m., Jan. 9-Mar. 13

Contemporary Political Ideologies, Pol 1041

KTCl: Tuesdays, 9:30-10 p.m., Jan. 8-Mar. 12

(repeats) Wednesdays, 9:30-10 p.m., Jan. 9-Mar. 13

KWCM: Thursdays, 7-7:30 a.m., Jan. 10-Mar. 14

Spring 1991

Registration dates: February 25-April 19

(If you are registering for a course broadcast in Duluth, you may register starting February 13.)

Radio courses

Journaling Into Fiction, EngW 3110

(See English, Creative and Professional Writing)

KUOM: Saturdays, 12-1 p.m., Mar. 30-June 1

Principles of Antique Collecting, Dsgn 3572

KUOM: Saturdays, 1-2 p.m., Mar. 30-June 1

Modern Science Fiction and Fantasy, Engl 1020

KUMD: Saturdays, 6-7 a.m., Mar. 16-May 18

Television courses

Second Language Programs for Young Children: Like Child's Play, Elem 5321

KTCI: Mondays, 9-9:30 p.m., Mar. 25-May 27

(repeats) Tuesdays, 5-5:30 p.m., Mar. 26-May 28

KWCM: Tuesdays, 7-7:30 a.m., Mar. 26-May 28

KSMQ: Wednesdays, 5:30-6 p.m., Mar. 27-May 29

(repeats) Thursdays, 2:30-3 p.m., Mar. 28-May 30

WDSE: Wednesdays, 6:15-6:45 a.m., Mar. 13-May 15

(repeats) Saturdays, 7:30-8 a.m., Mar. 16-May 18



Toward an Understanding of Child Sexual Abuse, PubH 5609/SW 5010

KTCl: Mondays, 9:30-10 p.m., Mar. 25-May 27
(repeats) Tuesdays, 5:30-6 p.m., Mar. 26-May 28

Introduction to the Visual Arts, Arth 1001

KTCl: Tuesdays, 9-9:30 p.m., Mar. 26-May 28
(repeats) Wednesdays, 9-9:30 p.m., Mar. 27-May 29

The Meanings of Place, AmSt 3920/5920, Arch 5956

KTCl: Tuesdays, 9:30-10 p.m., Mar. 26-May 28
(repeats) Wednesdays, 9:30-10 p.m., Mar. 27-May 29

KWCM: Thursdays, 7-7:30 a.m., Mar. 28-May 30

Audio and Video Cassette Courses

After courses are broadcast the first time over radio and television, they become available as audio cassette and video cassette courses. Descriptions of these courses are given in the *Course Descriptions* section of this bulletin. Students have up to one year to complete these courses. Audio and video cassette courses are not available for graduate credit.

How to Get Cassettes for Courses

Students who register for an **audio cassette course** can purchase the cassettes from Independent Study. The cost is listed in the *Course Descriptions* section of this bulletin.

If you do not wish to buy the audio cassettes, you may listen to them at the Learning Resources Center, Walter Library, Minneapolis campus, at the address and phone number listed above under **If You Miss a Program**.

Most **video cassette courses** are available on VHS cassettes for home use. To rent video cassettes from Independent Study, please write **Home Video course** on your registration form and include an additional \$20 as a rental fee (nonrefundable). Return the cassettes to Independent Study in good condition **within six months**. (You still have one year from the time you registered to complete the course.) If you do not return the cassette, your University grade transcript will be placed on **hold**. If you lose or damage a cassette, you will be required to pay the cost of replacing it (up to \$100). Home Video courses are available only within the continental United States.

Because the supply of cassettes is limited, we cannot accept transfers to Home Video courses from other Independent Study versions of courses.

If you do not wish to rent Home Video cassettes from Independent Study, you may view tapes of video courses at the Learning Resources Center, Walter Library, Minneapolis campus, at the address and phone number listed above under **If You Miss a Program**. Many video courses may also be viewed at the University learning centers at Duluth, Morris, and Rochester (also listed under **If You Miss a Pro-**

gram). A few video courses are available only through learning centers and not by Home Video cassettes. If cassettes for a course you want are not available in a center near you, please call 612/624-4393 to inquire; special arrangements can sometimes be made to send them to the center.

The following courses are available as **Home Video courses**. For information about them please check the Course Descriptions section of this bulletin or call 612/624-9008.

- Arch 5956/AmSt 3920/5920, The Meanings of Place**
- Comp 1031, Introduction to Business and Technical Communication**
- EdPA 5099, Inventing the Future**
- EPsy 5400, Career Development and Planning**
- EPsy 5960, Education of the Gifted and Talented**
- Engl 3410, Voices and Visions in American Poetry**
- FSoS 5200, Family Relationships**
- Hist 3822, The United States in the 20th Century: 1932-1960 (In preparation)**
- Hist 3841, American Business History**
- Hort 1010, Landscape Gardening**
- HSU 5008/PMed 5445, Social and Psychological Aspects of Physical Disability**
- JwSt 1034/3034/ReIS 1034/3034, Introduction to Judaism (In preparation)**
- Ling 1001, Nature of Human Language**
- Math 1211, Calculus I**
- Phys 1003, The Changing Physical World**
- Poi 1041, Contemporary Political Ideologies**
- PubH 5609, Toward an Understanding of Child Sexual Abuse**
- PubH 5642, Child Abuse and Neglect**
- Th 1101, Introduction to the Theatre (In preparation)**

Updates for Professionals Program (UPP)

The courses in this program are designed to help professionals in business and industry maintain their expertise in a climate of rapid technological change. UPP courses reflect cutting-edge research in a variety of disciplines, including computer science, chemical and electrical engineering, and statistical theory.

They were developed as intensive, non-credit short courses that can be used by groups or individuals. Course materials consist of video or audio tapes, printed materials, and occasionally computer software or other instructional tools.

UPP courses currently or soon to be available include:

Supercomputer Architecture and Programming—A nine hour discussion of the properties of supercomputer components and architectures. Specific emphasis is placed on multitasking, the advantages and problems of pipeline structure, and programming of science algorithms for optimal computation.

Making Decisions In Industry—Six hours of training in quantitative thinking that will enhance a person's ability to maximize decision options. Topics include ways to modify strategies as information accumulates and how to trade immediate pay-offs for information that will improve overall payoffs.

Signal Processing—An international panel of experts under the sponsorship of the Institute for Applied Mathematics presents six hours of lecture and discussion covering methods used in approaching one-dimensional and multidimensional problems in Signal Processing. Topics range from radar to x-ray crystallography.

Supercomputer Simulations In Astrophysics—Three hour demonstration of computational and display techniques used to simulate fluid dynamics experiments. Comparing model computations to observations of actual phenomena shows how the supercomputer handles complex calculations needed to simulate gaseous jets, the convection process, and the dynamics of heat transfer.

Strategies In Interfacial Engineering: Seeing In New Ways—Brief video introduction to advances in understanding colloidal and interfacial systems made possible by recent technology for directly viewing microstructures.

Computer Graphics—This course enables mathematicians, statisticians, and programmers without graphic experience to write 2D graphics applications programs using the Graphic Kernal System (GKS) and X-Windows. Video demonstrations include advanced graphics applications as well as basic techniques.

For further information on UPP courses, please call **612/624-9303**.

High School Courses

The University of Minnesota Department of Independent Study offers high school correspondence courses as an educational service to the state. These courses are approved by the State Department of Education and satisfy University of Minnesota entrance requirements. Courses offered through correspondence are particularly helpful for:

- students who need particular English, science, foreign language, or mathematics credit for college entrance;
- students who have been forced to drop out of school;
- handicapped students who cannot attend public high school;
- above-average students who have permission to accelerate their high school completion; or
- anyone wishing to study for personal satisfaction.

With the approval of local school authorities, Independent Study courses may be used to fulfill requirements for high school graduation. The high school diploma itself, however, is not granted by the Department of Independent Study, but by the local school board only. **Students expecting to use credits earned through Independent Study to meet graduation requirements should therefore obtain permission from local school authorities before enrolling.**

Adults 19 years or older who have left school and are eligible to take the General Educational Development (GED) tests for high school equivalency may also find it useful to take high school courses through Independent Study. Courses in English, mathematics, social studies, and other subjects can serve as a valuable review for students preparing to take the GED examinations. Detailed information about the GED examinations in Minnesota may be obtained by contacting the High School Certificate (GED) office, State Department of Education, Capitol Square Building, St. Paul, MN 55101, (612) 296-4057.

Admission, Tuition, and Fees

Independent Study courses are open to anyone who can benefit from them. High school credits are awarded, however, only in cooperation with local school authorities. **If you wish to earn credits for graduation, you must therefore enroll with the approval of your high school principal, counselor, or superintendent** (see "Approval for Registration" on the registration form). Tuition is \$40 per $\frac{1}{4}$ unit, and \$80 per $\frac{1}{2}$ unit (**tuition is subject to change without notice**). Please refer to the college Course Descriptions section for information on college tuition rates.

Either you or your local school district may pay the tuition for high school courses.

If your school district has agreed to pay the tuition, you must submit an authorization for payment along with registration materials (see "Approval for Registration" on the registration form).

The full amount of tuition and fees is payable at the time of registration, unless you choose to use the Partial Payment Plan (see below). This amount should include an additional remittance to cover the cost of airmail postage, if desired (see the General Information section, Lesson Service; Postage). Checks or money orders should be made payable to the University of Minnesota.

Books and Materials

See General Information, Textbooks and Supplies.

Cancellations and Withdrawals

See the General Information section, Grades; also see Refunds (below).

College Courses Through Independent Study

With the approval of the appropriate high school authority and the Department of Independent Study, high school students may complete college level courses for credit. Acceptance of such credit is, of course, a function of the college the student enters. See the Course Descriptions section of this bulletin for a complete list of college courses offered by Independent Study.

College level courses especially useful to high school students are:

Comp 0011 Preparation for Writing Practice

Comp 1011 Writing Practice I

GC 1085 How to Study

Rhet 1147 Efficient Reading

GC 0611 Mathematics Skills Review

Math 1008 Trigonometry

Engl 1016 Introduction to American Literature

GC 1534 Practical Law.

After Graduation Many high school graduates cannot go on to college immediately, but must seek temporary or long-term employment. For these people, Independent Study courses at the college level may be an important way of earning credits toward a degree or certificate. The Department of Independent Study offers courses in a wide range of subjects designed to meet individual needs. If you wish to continue your education through Independent Study courses, see the other sections of this bulletin.

ALL STUDENTS: FILL OUT THE FOLLOWING
CHECK ONLY ONE BOX PER QUESTION

1) Are you currently enrolled as an International Student "Non-resident alien"?

- Yes
 No

2) Please check your predominant ethnic background. (Ethnic Code)

- A Black, non-Hispanic (African American)
B American Indian or Alaskan Native
C Asian or Pacific Islander
D Hispanic--Puerto Rican, Cuban or Other Hispanic Origin
E Hispanic--Chicano or Mexican American
F White, non-Hispanic (Caucasian)

3) Please check your student status. (Student Status)

- 01 High School student
02 U of M day school student (please specify college)

03 U of M Extension student
04 U of M day/Extension student
05 Independent Study only
06 Technical/Community College student
07 Other Institution (please specify)

08 Other

6) What is your main purpose for enrolling? (Source Code)

- 01 To earn credits toward a degree or certificate program
02 For professional licensure or certification
03 Encountered a class schedule problem
04 Satisfy a personal interest
05 Assist me in my current job/promotion
06 Prepare me for a job/career change
07 Other

7) What is your main occupation? (Occupation Code)

- 01 Agricultural worker
02 Armed Services
03 Clerical worker
04 Crafts worker/repair worker
05 Educator
06 Homemaker
07 Machine Operator/Laborer
08 Manager, official, owner
09 Professional/Technical
10 Retired
11 Sales/Marketing
12 Homemaker
13 Student

						\$
						\$
						\$
						\$

ARE THERE PREREQUISITES FOR THESE COURSES? YES NO HAVE YOU COMPLETED THEM? YES NO

TYPE OF PAYMENT		AMOUNT DUE	CREDIT CARD INFORMATION		BILL TO DEPT./COMPANY: (attach authorization)	
Full Payment	<input type="checkbox"/>	Tuition \$ _____ Textbooks \$ _____	Visa	<input type="checkbox"/>	Name	_____
Partial Payment <small>(1/3 tuition per course)</small>	<input type="checkbox"/>	Service Charge \$ _____ <small>(\$4 per course for texts, \$5 per course for partial payment)</small> Study Guide \$ _____	MasterCard	<input type="checkbox"/>	Addr	_____
Credit Card	<input type="checkbox"/>	Tapes \$ _____ Other \$ _____	Card #	_____	City	_____
Bill Dept./Co.	<input type="checkbox"/>	*Tax (6%) \$ _____ Total \$ _____ <small>*Mpls. residents 6.5% tax</small>	Exp. Date	_____	State	_____ Zip _____
			MasterCard Bank #	_____		
			Name on Card	_____		
			Signature	_____		

ALSO FILL OUT THE REVERSE SIDE OF THIS REGISTRATION FORM.

Student's Signature _____ Date _____

FOR HIGH SCHOOL STUDENTS: (not to be used for PSEO registration) Approval for registration (to be signed by counselor, principal, or superintendent)

Signature _____ Title _____

School _____ Address _____

- 02 High school graduate
 - 03 Vocational/technical training
 - 04 Some college
 - 05 2-year associate/certificate degree
 - 06 4-year college degree
 - 07 Some graduate school
 - 08 Graduate or professional degree
 - 09 Other (please specify)
-

5) How did you learn about Independent Study courses? (Market Source)

- 01 Friend/Relative
 - 02 Advisor/Counselor
 - 03 Employer
 - 04 Independent Study Bulletin
 - 05 Extension Classes Bulletin
 - 06 Brochure, newsletter of flyer
 - 07 Minnesota Daily ad
 - 08 Other Newspaper ad (please specify)
-
- 09 Magazine ad (please specify)
-
- 10 Television (please specify)
-
- 11 Radio (please specify station)
-
- 12 Other (please specify)
-

courses? (Interest Area)

- 01 Arts/Humanities/Music
 - 02 Business/Industry/Management
 - 03 Communication/Writing
 - 04 Computers/Math
 - 05 Government/Public Affairs
 - 06 Health/Human Services
 - 07 History/Social Sciences
 - 08 Language/Literature
 - 09 Science/Technology/Engineering
 - 10 Other (please specify)
-

College PSEOA Enrollment

In 1985 the Minnesota state legislature enacted the Post-Secondary Enrollment Options Act (PSEOA). Under the PSEOA, eligible high school juniors and seniors can take college courses and earn high school units and, subsequently, college credits for the courses they successfully complete. The Minnesota State Department of Education pays for the tuition, fees, and books for the courses. The PSEOA can be used for Independent Study college courses.

High school students interested in taking courses through Independent Study under the PSEOA must submit all registration materials to the Advanced High School Student Services Office. Registration consists of:

1. consulting with high school counselor to complete PSEOA notice of registration form;
2. obtaining a high school transcript;
3. completing an Independent Study registration form;
4. providing a brief statement explaining the purpose of registering in the course (e.g., how you plan to use the credits).

If you have any questions regarding selection criteria, acceptable courses, or enrollment forms, please contact:

Advanced High School Student Services Office
University of Minnesota
337 Nolte Center
315 Pillsbury Drive SE
Minneapolis, MN 55455
612/626-1666

Credit Card Payment Plan

See the General Information section.

Credits and Grades

Independent Study courses satisfy University of Minnesota entrance requirements and may be accepted by local school districts in fulfillment of requirements for high school graduation. The courses listed in this section use the semester as the basis of credit evaluation. If your school uses a different basis, consult your counselor or principal. (Also see Admission, Tuition, and Fees, above)

Four passing grades are acceptable to earn credit in an Independent Study course: A, excellent; B, good; C, fair; and D, below average, but passing. The grade of F indicates unsatisfactory work; students who earn an F will not receive credit for the course. The University keeps a record of all courses completed and will mail grade reports to students and/or high school officials on request.

Exams

See the General Information section.

How to Enroll

- If you plan to apply Independent Study credits toward high school graduation, obtain permission to enroll from your local school district authorities. If you would like to know more about a course before enrolling, write to the Department of Independent Study for an introduction to the course. The introduction will give you an outline of the course content and work.
- Send a completed registration blank and tuition payment (including airmail postage, if applicable) to the Department of Independent Study, 45 Wesbrook Hall, 77 Pleasant St. SE, University of Minnesota, Minneapolis, Minnesota 55455. Remittances should be by check, money order, credit card, or authorization for payment from your local school district. Checks or money orders should be made payable to the University of Minnesota.

Learning Through Independent Study

- The study guide tells you how to proceed in a course. Read the study guide introduction carefully to understand the course format and study procedures.
- Most Independent Study courses require you to prepare lesson assignments based on required readings. Lesson assignments are submitted to the Department of Independent Study, evaluated by the instructor, and returned to you.
- Wait until one lesson assignment has been returned before submitting another. By doing this, you may consider any comments from your instructor and recognize your mistakes and strengths.
- Most courses require you to take examinations. All preceding lesson assignments must be completed before you take an exam. Specific exam information is given in the study guide.
- Exams may be taken at the offices of Independent Study or under the supervision of an acceptable proctor.
- It is best to set a study schedule and submit lesson assignments regularly.

Lesson Service and Mailing Procedures

See General Information, Lesson Service; Postage.

National University Continuing Education Association (NUCEA)

See the General Information section.

Partial Payment Plan

The Department of Independent Study offers a partial payment plan for those who cannot pay full tuition at the time of registration. This does not apply to tuition paid for by credit card. Texts and materials ordered through Independent Study must be paid in full at the time of purchase. Under this plan, one-third of the total tuition, plus a service charge of \$5 per course, is paid at the time of registration. The remaining two-thirds is payable in two equal payments due 30 and 60 days after the date of registration. A sample payment schedule (including \$5 service charge) is given below.

Tuition	1st payment	2nd payment	3rd payment
\$40 (1/4 unit)	\$18	\$13.50	\$13.50
\$80 (1/2 unit)	\$31	\$27	\$27

Lesson assignments will be accepted only through that third of the course for which tuition has been paid. For example, students enrolling in a 12-lesson course will not receive instruction beyond lesson 4 if they have only made the first payment. Registration will be cancelled if total tuition has not been paid within 90 days of the original registration date unless permission has been obtained from the Administrator at Independent Study. Once registration has been cancelled, you may continue a course only by reenrolling.

Students who want to use the partial payment plan should fill in the appropriate space on the registration form and send it, along with the service charge, the first payment, and any other fees, to Independent Study.

Refunds

If you cancel a course, you may request a partial refund if no more than three months has passed since the date of registration and you have not completed more than half the lessons in the course. Twenty-five percent of the cost of the course and \$6.00 for each lesson assignment serviced are nonrefundable. No money will be refunded after half of the course is completed, regardless of registration date.

Transfers and Reinstatements

You may enroll in an Independent Study course at any time during the year. Courses should be completed within one year from date of registration. If it is not possible to complete a course within that time, an extension for one additional year may be granted for a fee of \$25.

You may transfer your registration from one Independent Study course to another provided that your request is made within three months from your original registration and prior to completing half the lessons. The transfer fee is \$10, plus the cost of the study guide for the new course and \$6.00 for each completed lesson assignment. The original tuition will be applied to the tuition for the new course. The second course must be completed within one year from the date of the original registration, but an extension of one additional year may be granted as explained above.

Courses

Business

ACCOUNTING, PART A (9813)

1/2 unit—11 lessons—text price \$34—Strom

A simple accounting cycle for a small service business is worked out in 11 lessons and two application projects. Students will use debits, credits, balance sheets, general journals, ledgers, cash journals, work sheets, and income statements. This course will give an individual some of the basics of accounting.

GENERAL BUSINESS, PART A (9823)

1/2 unit—10 lessons—text price \$27—Seiler

Designed to acquaint students with the role of business in our economic system. Students also explore their relationships as consumers to business and our economic system. Topics include: business and our economic system; money, credit, and banks; earning an income; labor and management; taxation; economic problems; and citizenship as it relates to the free enterprise system.

GENERAL BUSINESS, PART B (9824)

1/2 unit—10 lessons—text price \$27—Seiler

A continuation of Part A, with emphasis on the role of the consumer in our economic system. Topics include: money management; the art of spending; consumer protection; consumer credit; making money payments; building financial security; and insurance.

SHORTHAND, PART A (9901)

1/2 unit—18 lessons—text price \$31—Lydell

An introduction to basic business shorthand including the alphabet, brief forms, and the theory of Gregg Simplified Shorthand. Upon completion, a student should be able to take dictation at 60 words per minute.

English

NINTH GRADE ENGLISH, PART A (9831)

1/2 unit—12 lessons—text price \$39—Hoke

An introduction to language and literature emphasizing recurring themes and problems in language and literature. Among the readings are selections from Homer, Steinbeck, Thurber, and Rawlings. Brief written exercises assist in the critical analysis of poetry and prose.

NINTH GRADE ENGLISH, PART B (9832)

1/2 unit—12 lessons—text price \$39—Hoke

A continuation of Part A. Readings include selections from Owen, Cummings, Sandburg, and Parks.

TENTH GRADE ENGLISH, PART A (9833)

1/2 unit—10 lessons—text price \$44—Hoke

An exploration of encounters with others, ourselves, and our environment. Students relate selected poetry and prose to their own lives and analyze the nature of our language and how it works in communicating experiences and ideas.

TENTH GRADE ENGLISH, PART B (9834)

1/2 unit—10 lessons—text price \$43—Hoke

A continuation of Part A.

ELEVENTH GRADE ENGLISH, PART A (9835)

1/2 unit—9 lessons—text price \$40—Hoke

An interdisciplinary approach to language and literature through a study of American literature from its earliest beginnings through the 19th century. Readings include selections from Jefferson, Crèvecoeur, de Tocqueville, Emerson, Thoreau, Whitman, Poe, Hawthorne, Harte, Twain, James, and Crane. Mod-

ern writers such as James Baldwin, E.B. White, and Arthur Schlesinger, however, are also included in order to put the ideas and dreams of early American writers in a more meaningful perspective.

ELEVENTH GRADE ENGLISH, PART B (9836)

1/2 unit—9 lessons—text price \$40—Hoke

A continuation of Part A, this course includes a discussion of American language and literature up to and including the present. Poetry, drama, short stories, and essays are analyzed. (Prerequisite: Eleventh Grade English, Part A, or equivalent)

TWELFTH GRADE ENGLISH, PART A (9847)

1/2 unit—10 lessons—text price \$41—Hoke

A thematic approach to the study of Western literature. Lesson topics include ways of looking at literature, the conflict of wills, choices and consequences, and the personal essay. Students will explore these topics in the works of Orwell, de Maupassant, Sophocles, Moliere, Chaucer, Plato, Hardy, Greene, Woolf, Tolstoy, Camus, and others.

TWELFTH GRADE ENGLISH, PART B (9848)

1/2 unit—10 lessons—text price \$45—Hoke

A continuation of Twelfth Grade English, Part A. Topics explored are appearance versus reality, protest against injustice, and the search for meaning in life. Students will explore these topics in the works of Ibsen, Kafka, Auden, Lawrence, Swift, Mansfield, Zola, Conrad, Joyce, and others.

STRAIGHT THINKING (9839)

1/4 unit—6 lessons—no required text—Hoke

An examination of the important differences between clear and unclear thinking. Barriers to clear thinking, such as assumptions, opinions, and common fallacies, are identified and analyzed. Language, viewpoint, and experience, as they affect thinking, are also investigated. The use of a cassette recorder to complete the assignments and the final examination is optional. The Department of Independent Study will furnish one blank cassette tape to students who have access to a recorder.

YOUTH IN CONFLICT (9840)

1/4 unit—6 lessons—text price \$17—Hoke

The course examines, through two novels and a musical play, the reactions of young people to violence, war, and the conflicts associated with seeking and finding one's identity. The use of a cassette recorder to complete the assignments and the final exam is optional. The Department of Independent Study will furnish one blank cassette tape to students who have access to a recorder.

MEANING AND SELF-DISCOVERY IN LITERATURE (9841)

1/4 unit—6 lessons—text price \$17—Hoke

In examining the viewpoint of three authors, this course traces the actions of characters in two novels and a play as they search for, and attempt to define, the meaning of their own lives and of life in general. The use of a cassette recorder to complete the assignments and the final examination is optional. Independent Study will furnish one blank cassette tape to students who have access to a recorder.

PRACTICAL WRITING (9842)

1/4 unit—6 lessons—no required text—Hoke

A comprehensive introduction to written communication. Descriptive, narrative, analytical, comparative, critical, and persuasive writing are discussed and illustrated. Students are required to submit one example of each of these forms of writing.

ADVANCED COMPOSITION (9845)

1/2 unit—12 lessons—no required text—Hoke

Designed for the student who wants additional practice in expository writing, this course offers experience in composing essays of description, persuasion, comparison/contrast, criticism, interpretation, and stylistic imitation. One assignment involves analyzing a newspaper article.

CREATIVE WRITING (9849)

1/2 unit—9 lessons—no required text—Hoke

A comprehensive introduction to various types of creative writing. Students explore the sources of creative writing and learn how to describe a scene, reveal character, tell a story, and write poetry, a short script, and an article or personal essay. In addition to submitting one example of each of these forms of creative writing, students are required to write a longer final paper. No exams.

CONTEMPORARY LITERATURE/CONTEMPORARY PROBLEMS (9843)

1/2 unit—8 lessons—text price \$48—Hoke

A presentation of literature with a view to understanding contemporary problems, this course permits students to gain insights into the problems of Indians, blacks, women, ecology, and the future.

THE BLACK AMERICAN EXPERIENCE (9924)

1/2 unit—9 lessons—text price \$20—Hoke

Through literature, this course provides an examination of the African heritage and the slave experience of black Americans. Students read short stories, an autobiography, and poetry written by black authors.

THE AMERICAN DREAM IN AMERICAN DRAMA (9646)

1/2 unit—10 lessons—text price \$41—Hoke

Examines the notion of America as the "Promised Land," offering wealth, security, equality, and opportunity to all citizens. The American Dream is explored in 11 modern plays (1920-1972). Among the plots and themes are the story of a successful winegrower who needed a bride, black people reaching for wealth, and contemporary alienation.

CONTEMPORARY GLOBAL PROBLEMS (9925)

1/2 unit—10 lessons—text price \$19—R. Erickson

This course examines many of the important issues facing the citizens of the world today. It introduces students to ways of thinking about themselves and their opinions on contemporary world problems, and gives them a foundation for understanding the world in the future.

Languages

College level foreign language courses are available in the following languages.

French

Norwegian

German

Russian

Greek (Classical)

Spanish

Italian

Swedish

Latin

For information on these courses, see the Course Descriptions section.

BEGINNING RUSSIAN, PART A (9961)

1/2 unit—10 lessons—text price \$16—3 audio cassettes \$7—Donchenko

Reading, writing, translation, and grammar of the Russian language. **This course is now in preparation; please inquire before enrolling.**

BEGINNING RUSSIAN, PART B (9962)

1/2 unit—10 lessons—text price \$16—3 audio cassettes \$7—Donchenko

Continuation of Beginning Russian, Part A. (Prerequisite: Beginning Russian, Part A, or equivalent) **This course is now in preparation; please inquire before enrolling.**

Mathematics

ELEMENTARY ALGEBRA, PART A (9692)

1/2 unit—12 lessons—text price \$33—Ekstrand

A basic course in elementary algebra designed to acquaint students with basic algebraic notation, sets and variables, properties and operations of real numbers, equations and inequalities in one and two variables, and systems of linear equations and inequalities. Appropriate for those with either a traditional or modern mathematics background. (Prerequisite: basic arithmetic)

ELEMENTARY ALGEBRA, PART B (9693)

1/2 unit—12 lessons—text price \$33—Ekstrand

A continuation of Elementary Algebra, Part A. (Prerequisite: Elementary Algebra, Part A, or equivalent)

PLANE GEOMETRY, PART A (9687)

1/2 unit—13 lessons—text price \$34—Walther

A basic course in high school geometry. Lesson topics include points, lines and planes, proofs, angles,

theorems, parallel lines, proving lines parallel, proving triangles congruent, congruent segments and angles, applying congruent triangles, inequalities, definitions and properties of similar polygons, working with similar triangles, Pythagorean theorem, and ratios, proportion, and similarity. (Prerequisite: one year of high school elementary algebra or equivalent)

PLANE GEOMETRY, PART B (9885)

1/2 unit—13 lessons—text price \$34—Walther

A continuation of Plane Geometry, Part A, this course emphasizes circle relationships, areas and volumes, solids, cylinders, cones, spheres, distance, midpoint, slope formulas, coordinate geometry, and geometric constructions and transformations. (Prerequisite: Plane Geometry, Part A, or equivalent)

TRIGONOMETRY (9876)

1/2 unit—12 lessons—text price \$23—Walther

An introduction to basic trigonometric functions and their use in solving right and oblique triangles. Lesson topics include logarithmic computation, radian and mil measure, conditional trigonometric equations and identities, graphing, linear and angular velocity, sines, cosines and tangents, half-angle and double-angle formulas, vectors, complex numbers, and the applications of trigonometry to surveying and navigation. This course is especially useful for students planning to go into surveying, navigation, or engineering, or preparing for advanced college mathematics of any kind. (Prerequisite: one year high school plane geometry or equivalent and one year higher algebra or equivalent)

HIGHER ALGEBRA, PART A (9885)

1/2 unit—10 lessons—text price \$39—Ekstrand

An extensive review of concepts learned in elementary algebra and the further development of topics in linear equations, factoring, fractions, exponents, complex numbers, and quadratic equations. Intended for those who wish to bring their competence in mathematics to a higher level or those preparing to enter college. (Prerequisite: one year high school elementary algebra or equivalent)

HIGHER ALGEBRA, PART B (9886)

1/2 unit—10 lessons—text price \$39—Ekstrand

A continuation of Higher Algebra, Part A. Lesson topics include functions, radicals, graphical methods, systems of quadratics, determinants, ratio and variation, binomial theorem, factorials, logarithms, and progressions. (Prerequisite: Higher Algebra, Part A, or equivalent)

MATHEMATICS FOR THE CONSUMER, PART A: GETTING THE BASICS (9881)

1/4 unit—6 lessons—text price \$31—A. Koch

A course designed to help students recapture and strengthen basic mathematical skills, such as the multiplication, division, addition, and subtraction of fractions and decimals. The text for the course emphasizes the words and ideas used in today's business world.

MATHEMATICS FOR THE CONSUMER, PART B: BANKING AND INVESTING (9882)

1/4 unit—6 lessons—text price \$31—A. Koch

A continuation of Part A with emphasis on practical problems related to banking and investing.

MATHEMATICS FOR THE CONSUMER, PART C: CONSUMER SPENDING (9883)

1/4 unit—6 lessons—text price \$31—A. Koch

A continuation of Part A with emphasis on installment buying, taxes, pricing, invoicing, and discounting.

MATHEMATICS FOR THE CONSUMER, PART D: INSURANCE AND SPECIAL PROBLEMS (9884)

1/4 unit—6 lessons—text price \$31—A. Koch

A continuation of Part A with emphasis on automobile, life and home insurance; overtime earnings; budgeting; and depreciation.

Science

BIOLOGY, PART A (9801)

1/2 unit—10 lessons—text price \$40—Jeddeloh

Lesson topics include the cell, basic biological processes, and comparative anatomy and physiology as they relate to evolution and human biology.

BIOLOGY, PART B (9802)

$\frac{1}{2}$ unit—10 lessons—text price \$40—Jeddeloh

A continuation of Part A. General topics include human inheritance, embryology and evolution; viruses, molds, yeasts and bacteria and their importance to man; and green plants and their functions. (Prerequisite: Biology, Part A, or one semester of high school biology)

PHYSICS, PART A (9909)

$\frac{1}{2}$ unit—9 lessons/10 experiments—text price \$35—Koser

This course explores the basic principles and laws of physics in the areas of motion and the causes of motion, forces and interactions, work, energy, momentum, kinetic theory of matter, heat transfer, and the interaction of heat and work. Students apply these laws and principles in the lesson assignment problems and in 10 experiments. The experiments can be performed using materials found in most homes (e.g., a watch or other timer, a measuring device, C clamps, pennies, string, quart jars). (Prerequisites: high school algebra, geometry, and advanced algebra or trigonometry)

PHYSICS, PART B (9910)

$\frac{1}{2}$ unit—6 lessons/7 experiments—text price \$35—experiment materials approximately \$34—Koser

The second part of the physics sequence, this course considers the electromagnetic spectrum and the nature of light, geometric optics, diffraction and polarization, electrostatics, D.C. circuits, and electromagnetic induction. The experiment materials can be purchased as needed at electronics or hobby stores or purchased as a kit from Independent Study. (Prerequisites: high school algebra, geometry, and advanced algebra or trigonometry)

**Social Studies****PROBLEMS OF AMERICAN DEMOCRACY, PART A (9911)**

$\frac{1}{2}$ unit—12 lessons—text price \$29—Johnson

A basic introduction to the theory and reality of American social problems, this course is equivalent to the first half of 12th grade social studies. The topics covered include society and culture, the process of socialization, problems of social mobility, and problems of continuity and change.

PROBLEMS OF AMERICAN DEMOCRACY, PART B (9912)

1/2 unit—12 lessons—text price \$37—Johnson

This course is equivalent to the second half of 12th grade social studies. Lesson topics include principles and practices of government, the political processes, national government, financing government, and the United States and world affairs.

WORLD HISTORY, PART A (9920)

1/2 unit—12 lessons—text price \$40—Johnson

A cultural study of world history, with emphasis on the Middle East, Asia, and Africa.

WORLD HISTORY, PART B (9921)

1/2 unit—12 lessons—text price \$40—Johnson

A continuation of World History, Part A. Survey of world events since the beginning of World War I.

AMERICAN HISTORY, PART A (9922)

1/2 unit—12 lessons—text price \$38—Jasper

Survey of American history from early colonization through the Civil War and Reconstruction. Also designed to acquaint students with the processes involved in gathering and interpreting historical information.

AMERICAN HISTORY, PART B (9923)

1/2 unit—12 lessons—text price \$43—Jasper

A continuation of American History, Part A. This course covers the history of the period following Reconstruction through the 1970s.

GENERAL PSYCHOLOGY, PART A (9941)

1/2 unit—14 lessons—text price \$35—Hoke

Survey of psychology and psychological methods, this course is designed to acquaint students with the manner in which psychologists examine and attempt to explain human behavior. Topics that will be studied include sensation, perception, learning, motivation, and behavior.

GENERAL PSYCHOLOGY, PART B (9942)

1/2 unit—16 lessons—text price \$35—Hoke

A continuation of Part A. Topics to be studied include verbal behavior, cognitive processes, frustration and conflict, individual differences, personality, behavior pathology, social psychology, and foundations of behavior. (Prerequisite: General Psychology, Part A)

PROJECT SELF-DISCOVERY (9943)

1/2 unit—10 lessons—no required text—Falk

Through introspective lesson assignments, students gain a better understanding of themselves and their world. Designed to encourage students to grow to see themselves in positive ways, perceive themselves and their world accurately and realistically, and learn to identify with and relate to other people.

High School Faculty

Adele Donchenko, Ph.D.

Associate Professor
Russian and East European Studies
College of Liberal Arts
University of Minnesota

David L. Ekstrand, M.A.

Mathematics Professor
St. Thomas Academy
St. Paul, Minnesota

Robert C. Erickson, M.A.

Director
Global Studies Resource Center

Robert J. Falk, Ph.D.

Associate Professor Emeritus
Department of Psychology and Mental Health
University of Minnesota Duluth

Kenneth Jeddleloh, Ph.D.

Science Teacher
Minneapolis Public Schools

Melvin A. Hoke, M.A.

English Instructor
South High School
Minneapolis

Bruce H. Jasper, B.A., B.S.
Social Studies Instructor
Hosterman Junior High School
New Hope

Fred A. Johnson, Ph.D.
Social and Behavioral Sciences
Division
General College
University of Minnesota

Arne J. Koch, M.A.
Instructor
Continuing Education & Extension
University of Minnesota

John F. Koser, M.S.
Physics and Astronomy Teacher
Wayzata Senior High School
Wayzata, Minnesota

Margaret K. Lydell, M.A.
Instructor
Continuing Education & Extension
University of Minnesota

Gary R. Sellar, B.S.
Instructor
Continuing Education & Extension
University of Minnesota

Gary G. Strom, M.S.
Business Instructor
Minneapolis Technical College

John W. Walther, M.Ed.
Math Instructor
South High School
Minneapolis

General Information

Admission

There are no entrance requirements for admission to Independent Study, although registration in specific programs or courses may require prerequisite study or experience. Prerequisites are noted in the course descriptions in this bulletin. Most Independent Study courses may be started at any time and should be completed within one year from the date of registration.

Academic Progress

For students not held to other college, department, or program academic standards, Continuing Education and Extension will determine scholastic standing by evaluating satisfactory progress with the following criteria:

completion of two-thirds (66 percent) of total credits for the year (summer session I through Spring quarter) with grades of A, B, C, or S. Grades of D, N, I, and F are not considered satisfactory. Grades of W are not considered in this evaluation.

The formula for determining this is:

$$\frac{\text{total credits graded A, B, C, or S}}{\text{total credits graded A, B, C, D, F, S, N, or I}} = 66 \text{ percent}$$

Grades in repeated courses and noncredit remedial courses are considered in total credits.

Students who do not meet the criteria for good academic standing will not be eligible to receive financial aid, veterans benefits, and specially-funded programs.

Students determined not to be in good academic standing will have an opportunity to appeal their status if there is additional information to present that may change their academic standing. Students are encouraged to contact an Extension advisor at 625-2500 for further information and assistance in reviewing options, study skills, and steps that might improve academic standing.

Audio Cassette Courses

See the blue section

Cassette Tapes

See Tapes

General Information

Contract Alternative

If you enroll under contract alternative, you are exempt from submitting a course's lesson assignments. You complete a project in lieu of the lesson assignments. Enrollment procedures for contract alternative can be obtained by writing to the Department of Independent Study. Enrollment under this method carries full tuition and may only be used with the correspondence courses listed in this bulletin. To receive credit, you will be expected to complete your project, pass a final exam, and/or, in some way chosen by the course instructor, demonstrate your mastery of the course content.

Correspondence Courses

Most of the courses offered by Independent Study are correspondence courses. You can enroll in a correspondence course at any time, take up to a year to complete it, and study where and when you have the time. When you enroll in a correspondence course, you receive a study guide that lists the required texts and materials and contains the lesson assignments you have to complete.

Each lesson usually has a reading assignment in the required text or texts, study notes that contain additional information about the lesson topic and examples (especially in the math and science courses), and a lesson assignment. After you send in a lesson assignment, it is evaluated by the course instructor and returned to you with a letter grade and comments. For most courses you also have to successfully complete one or more exams. The correspondence method is most suitable for people who want an organized program of study that closely approximates the content and format of day classes at the University.

Counseling and Advising Services

The Extension Counseling Office offers counseling, academic advising, and financial aid advising services to all students registered or planning to register in courses offered by Continuing Education and Extension. Academic advising can help you determine prerequisites and academic standing, evaluate transcripts, choose courses, and evaluate the applicability of Independent Study credits to specific degree and certificate programs.

Professional counseling services are available, for a fee, to assist persons with exploration, choice, planning, and implementation of career and educational goals. Counselors can help students learn more about their interests, values, abilities, and personal characteristics related to students' goals; identify career options and major fields of study; develop educational and career plans; and assess problems related to academic performance. Students may call 612/625-2500 to arrange for day or evening appointments or to consult with an adviser by

General Information

phone. Advisers can also be contacted by mail at the following address:

Department of Extension Counseling
314 Nolte Center
315 Pillsbury Drive SE
Minneapolis, MN 55455

Course Completion

Students have one year to complete most Independent Study courses. However, you must take full responsibility for meeting graduation or certification deadlines. Allow at least three weeks from the date you complete a course for the course grade to be recorded on the transcript in the Office of the Registrar. Students with special time limitations should check with Independent Study—before enrolling—about the feasibility of meeting their particular credit deadline.

To ensure that students have a satisfactory learning experience, a **minimum of six weeks** is required to **complete** an Independent Study course. The six weeks begins the date the first lesson assignment is submitted rather than the date of registration. No course grade will be submitted to the Registrar in fewer than six weeks from the date of submission of lesson assignment one. Also, students may submit a **maximum of two lesson assignments per week**. An exam is counted as a lesson assignment under this policy. This means that if you submit two lesson assignments in one week (7 calendar days), you **cannot** also take an exam for the same course during that same week.

Credit by Examination

Credit by examination is an alternative method of earning credits. Under this method, you prepare on your own for course exams for any correspondence course listed in this bulletin. When you pass the final exam, you receive credit for the course. You will not be allowed to submit work for your instructor's evaluation before writing the exams. This method is primarily recommended for students who want to earn credit for their extensive knowledge in a specific subject area.

To enroll under credit by exam, you must send (1) a letter describing your background and reason for choosing this method, (2) a transcript of all college-level work, and (3) a completed Independent Study registration form to the Department of Independent Study. Independent Study, in consultation with an appropriate instructor, will decide either to approve your registration under the credit by exam method or recommend the correspondence lesson method. As with other Independent Study methods, you will receive a study guide on acceptance of your registration, even though you will not be required to complete the lesson assignments in it.

The tuition for credit by exam is \$50 (\$40 for exams, plus \$10 for materials). You may take your exams either at the Department of Independent Study or under the

General Information

supervision of an approved proctor (see Examinations). If you cancel within three months of registering under credit by exam, a \$20 cancellation fee plus the \$10 for materials is nonrefundable.

Credit Card Payment Plan

If you want to, you can use your Visa or MasterCard to pay for the tuition, fees, and materials (texts, tapes, etc.) for an Independent Study course. To determine what your total credit card payment should be, fill out a registration form, listing the tuition of the course or courses you want to enroll in, the cost of texts (if you want to purchase them at the time you register), the cost of tapes (if necessary for a course), and fees (see Postage). Be sure to fill in both the box labeled Full Payment Plan and the box labeled Credit Card Payment on the registration form. When you fill in the Credit Card Payment box, check whether you're using Visa or MasterCard and have the credit card holder sign on the appropriate line. You **cannot** use your credit card to pay for a course on the Partial Payment Plan.

Credits

The University of Minnesota uses the quarter hour as the basis of credit evaluation. A quarter hour equals approximately 2/3 of a semester hour. All credits listed in this bulletin are quarter-hour credits.

The following credit designations are used in the course descriptions.

Degree credit may be used in a degree program. Officials at colleges or universities determine which Independent Study courses will be accepted to fulfill degree requirements at their institutions. To receive degree credit for Independent Study courses, you should obtain approval from that institution before enrolling. University of Minnesota students should consult an advisor in their major department. (See University Degree Programs section.)

Certificate credit may be used in appropriate Continuing Education and Extension certificate programs. Certificate credit courses are college level but do not carry degree credit and have no counterpart in day classes at the University of Minnesota. (For more information, see Extension Certificate Programs section.)

No credit is given for some courses, although grades may be assigned. (Also see Enrolling in Credit Courses on a Noncredit Basis.)

Resident Credit

Degree courses described in this bulletin parallel or are equivalent to courses with the same title and course number offered in day sessions at the University of Minnesota. Through action of the University Senate, Independent Study credits are considered resident credits.

Graduate Credit

See University Degree Programs section, Graduate School

Enrolling in Credit Courses on a Noncredit Basis

Any course listed in this bulletin may be taken on a noncredit basis by simply indicating "NC" in the "Credits" column of the registration form. Usually, instructors will expect the same quality of work and will grade both credit and noncredit students on the same basis. You may change from a noncredit to a credit registration anytime before submitting lesson assignment 3. Enrollment in a credit course on a noncredit basis requires the payment of full tuition.

DANTES

The Defense Activity for Non-Traditional Education Support (DANTES) was established in June 1974 to provide educational support for voluntary education programs for military organizations. Military personnel on active duty should contact their Education Officer for additional information concerning enrollment through this program.

Degree Candidates

See University Degree Programs

Directed Study (Individual Study)

This method is suggested for courses not listed in this bulletin and not available through departmental reading courses. Projects requiring cross-disciplinary study are most appropriate for this method. Directed study lets you undertake and complete academic work of your own design. Before registering for directed study, you need to secure the approval of an instructor in whose field the course is relevant. It is the student's responsibility to find an appropriate instructor. To apply for registration under this method, write to the Department of Independent Study and request an Individual Study Proposal Form. The form will be mailed to you along with further instructions for directed study registration. You will have one year to complete your work before your registration expires.

Discontinued Courses

The unavailability of materials, books, or instructors sometimes makes it necessary to discontinue accepting enrollments in an Independent Study course. If you mail in a registration form for a course that has been discontinued, your tuition will be returned or, if requested, applied to another course with the same tuition cost.

General Information

Duluth Credit

Independent Study currently offers three courses (Comm 5120, Engr 3016, and WS 1990) that carry University of Minnesota Duluth credit only. If you enroll in any of these courses, they will appear on your day school transcript.

Examinations

Most Independent Study courses include a final examination and one or more midcourse examinations. You must present a photo ID (U of M student ID, driver's license, etc.) in order to take an exam. You **cannot** take an exam until all lesson assignments up to the exam have been graded and the grades recorded on your record at Independent Study. Exams are usually supervised and may be taken at the following offices or under the supervision of the following individuals.

1. Department of Independent Study, 45 Wesbrook Hall, Minneapolis campus of the University. Office hours are from 7:45 a.m. to 4:30 p.m., Monday through Friday. No appointment is necessary during regular hours. If you wish to take your examination on the **first or second** Tuesday evening during October through June, you should call 624-0000. During July, August, and September, you can take an exam in the evening (4:30-8:00 p.m.) only on the **first** Tuesday of the month. You must call and make an appointment to take an exam in the evening. You must be finished with an exam by 8 p.m.

Students in the Twin Cities area are urged to take their examinations at the offices of the Department of Independent Study.

2. Continuing Education and Extension Offices (by appointment only):

Crookston: Academic Affairs, 302 Selvig Hall, 218-281-6510, ext. 439
Arts and Sciences, 153 Dowell Annex, 218-281-6510, ext. 377

Duluth: 104 Darland Administration Building, 218-726-8113

Morris: Morris Learning Center, 232 Community Services Building,
612-589-2211, ext. 6456

Rochester: Friedell Building, 1200 South Broadway, 507-288-4584

3. The Independent Study department of any member institution of the National University Continuing Education Association.
4. A school superintendent, principal, or counselor; a faculty member or administrator of an accredited university or college; a head librarian.
5. A commissioned officer whose rank is higher than your own (for students in the military only).
6. A corporate education director.

The Department of Independent Study reserves the right to reject any supervisor.

General Information

Regardless of academic qualifications, no relative, work supervisor, or immediate employer may proctor an examination. No proctor fees are authorized.

A Request for Examination form for each exam is included in the study guide. To take your examinations at locations other than the offices of the Department of Independent Study, you must contact the individual who will proctor your examination before sending the Request for Examination form to the Department of Independent Study. Examinations are mailed directly to the supervisor at his or her business location.

Extension Certificates

See Extension Certificate Programs section

Faculty

Instructors for all Independent Study courses are approved by the University academic departments through which the courses are offered. In most cases, Independent Study instructors are faculty members at the University, although faculty from other colleges and universities, or specialists in professional and business fields, also teach Independent Study courses. A complete faculty list is given at the end of this bulletin.

During the past several years, faculty from various departments have taken part in course review and evaluation seminars that critically analyzed Independent Study courses and course materials. The first seminar, funded by a grant from the National Endowment for the Humanities, examined existing courses in the humanities and considered the design of effective undergraduate instruction. Seminars held each summer since then have analyzed courses and course instruction in the social sciences, humanities, and natural sciences.

Fees

See Tuition, Postage, Credit Card Payment Plan

Financial Aid

Independent Study students may be eligible for the financial aid programs listed below. Most programs limit enrollment to part-time study. Students **cannot** use Pell Grant, Stafford Loan (formerly Guaranteed Student Loan) and other educational loans, or campus-based aid (College Work-Study, Supplemental Educational Opportunity Grant, Perkins Loan, University grants, loans and scholarships administered by the Office of Student Financial Aid) for Independent Study.

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Minnesota Part-Time Student Grant Program—The MPTSGP provides funds primarily for students enrolled for five credits per quarter. (Students registered for 6-11 credits may be considered for MPTSGP for **one quarter only** if they have a time lapse in their education and have not received Minnesota State Grant funds.) Eligibility requirements are: U.S. citizen or permanent resident of the United States, Minnesota residency; enrollment in undergraduate coursework applicable to a degree or certificate program and maintenance of satisfactory academic progress; no prior bachelor's degree; and demonstration of financial need.

Financial need criteria are based on the previous year's income (1989 income for the 1990-91 academic year or, under some circumstances, on the present year's estimated income). An applicant's total federal-adjusted gross income and untaxed income must not exceed the following levels: one-person family, \$11,750; two-person family, \$15,725; three-person family, \$19,525; four-person family, \$24,200; five-person family, \$26,000; six-person family, \$27,950; seven-person family, \$30,100; eight-person family, \$32,100; nine-person family, \$34,425.

Awards can be used for tuition and fees, books and supplies, transportation and childcare costs incurred while students are attending classes. The grant may supplement other aid, including scholarships and employer tuition reimbursement. Awards are contingent on state funding. Applications will be accepted until all funds for each quarter have been committed. Information is available at Extension Counseling, 314 Nolte Center, 612/625-4334.

Business Firms—Many business firms help subsidize the education of their employees. Before enrolling, you are urged to talk with your company's personnel or education officer about possible tuition assistance for Independent Study.

Minnesota State Grant Program—The MSGP is administered by the Minnesota Higher Education Coordinating Board. It provides funds for part-time enrollment through Independent Study. Eligibility requirements are: U.S. citizen or permanent resident of the United States, Minnesota resident; enrollment in coursework applicable to a degree or certificate program and maintenance of satisfactory academic progress; registration **exclusively** through Independent Study for 6-11 credits per quarter (no additional registration through Extension classes, day school, or at another institution); and demonstration of financial need. In addition, applicants must not already have earned a bachelor's degree and must not have completed four years of education on a full-time basis beyond high school. MSGP checks must be picked up on campus unless geographical distance or extenuating circumstances make it difficult to travel to campus. Students who live more than 50 miles from campus or have other barriers should contact Extension Counseling. Applicants use the ACT application, which is available at Financial Aid, 210 Fraser Hall, or at Extension Counseling, 314 Nolte Center. Call Extension Counseling (612/625-4334) for a set of procedures outlining the steps that must be followed.

Aid For Students With Disabilities—Funds are available through most State Departments of Education. Minnesota residents can obtain information about the Minnesota Department of Rehabilitation Services (DRS) from the DRS Liaison,

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Room 12, Johnston Hall (624-4037), or from local Department of Rehabilitation Services offices.

Tuition Assistance Program/Project HELP—Part-time students enrolled in Independent Study courses who do not qualify for any other grant or scholarship aid may be eligible for a TAP or Project HELP grant for one course each quarter. Applicants must reside in Minnesota and be U.S. citizens or permanent residents. In addition to financial need, students must fit into one additional category—minority, high ability, or educationally disadvantaged. Applications will be accepted until all funds for each term have been committed. Information is available at Extension Counseling, 314 Nolte Center, 612/625-4334.

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. For an application form, write to the Extension Counseling Office. Preference will be given to students in the fields of history, education, art, and audio-visual education. Applications are considered each July for the academic year.

Military Veterans—To satisfy Veterans Administration requirements, veterans registering under the G.I. Bill must enroll in courses that are applicable to degree, certificate, or other educational objectives approved by the Veterans Administration. Eligible students may apply under: **New G.I. Bill (Chapter 30) Montgomery; VEAP (Chapter 32) Post-Vietnam Era; Reserve and National Guard Educational Program (Chapter 106)**. Educational plans and transcripts of all college work must be reviewed with an Extension Counselor before the Department of Independent Study can certify registration to the Veterans Administration. Counselors can be reached at **612/625-2500** or by writing Veterans Counselor, Extension Counseling Department, 314 Nolte Center, 315 Pillsbury Drive SE, University of Minnesota, Minneapolis, Minnesota 55455.

Academic Progress—To be eligible for financial aid, you must meet specific academic progress standards. Refer to the Academic Progress information on the first page of the General Information section. Additional information is available at Extension Counseling, 314 Nolte Center; 612/625-4334.

Registration With Delayed Payment (MSGP)—If your Minnesota State Grant Program (MSGP) check will not be available to you in time to pay tuition and fees, contact a financial aid adviser in Extension Counseling for information about delayed payment. Requests for delayed payment will be accepted from the first day of the quarter through the end of the second week of classes. Example: fall quarter 1990 requests will be taken from Sept. 4 through Oct. 5.

To be considered for delayed payment, your record at the University of Minnesota must indicate that you are eligible for aid and that you have no holds on your record. You will also need to submit a copy of your award letter from the Minnesota Higher Education Coordinating Board that shows eligibility for MSGP at the University of Minnesota, Twin Cities.

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Repayment of Educational Loans (Enrollment Verification)—In most cases, you may defer repayment of a Stafford Loan (formerly Guaranteed Student Loan), or other educational loan awarded in a previous year, provided that you enroll for at least six credits per quarter and you have not exceeded the six-month grace period. (Example: if you enroll for six credits for fall quarter, you must register for six additional credits winter quarter and six more credits for spring quarter.) If you have exceeded the grace period and have begun repayment of an educational loan, you can regain deferment eligibility by enrolling full-time (12 credits minimum) each quarter. For additional information, contact your lender or loan-servicing agency.

The following dates define quarter of registration:

6/11/90 through 8/31/90—summer

9/4/90 through 12/12/90—fall

12/13/90 through 3/20/91—winter

3/21/91 through 6/8/91—spring

Financial Aid Advising—Independent Study students who have questions or problems about financial aid are encouraged to call or write Extension Counseling, 314 Nolte Center, 315 Pillsbury Drive SE, University of Minnesota, Minneapolis, MN 55455 (612/625-4334). Financial aid workshops for CEE students will be offered throughout the year. Information about times and locations are available from Extension Counseling.

Grades

The University uses the A-F and the S-N grading systems. Indicate on your registration form which system you wish to be graded on. You may change to another system at any time before submitting lesson assignment 3. If there is a grading system restriction for a course, it is indicated in the course description. Your final grade is sent to you upon completion of each Independent Study course.

Grading procedures and requirements are left largely to the discretion of the instructor, who is in the best position to evaluate a student's skill, knowledge, and progress. Grading policies employed in specific courses are usually outlined in the study guide for each course. Questions or problems concerning grades earned in Independent Study should be sent to the Administrator, Department of Independent Study.

A-F Grading System

There are four passing grades in the A-F system: A, B, C, and D. A grade of F indicates unsuccessful completion of the course. A grade of D reflects standard work and must be balanced by grades of A or B in order to maintain the C average required by the University. See Academic Progress (above) for more details.

S-N Grading System

The S-N system is an alternative to the A-F system. S represents achievement that is satisfactory to the instructor. (The standards for S may vary from one course to another.) The symbol N, which stands for no credit, is assigned when a student does not earn an S. Each college determines which courses or what proportion of courses may be taken on the S-N system. Students who intend to apply Independent Study credits taken on the S-N system toward a degree or certificate at the University should contact their college office or the Extension Counseling Office before enrolling.

Students not working on a degree or certificate program, and not intending to apply credits toward such a program later, may use the S-N system for any number of courses.

Incompletes

You have one year from the date of registration to complete most Independent Study courses. In most cases, if you cannot complete the course in that year, you may extend your enrollment for one additional year by paying a reinstatement fee of \$25. Reinstatements must be **requested in writing**. Sometimes, however, reinstatements are not possible because of a change of instructor, changes in course requirements, changes in course texts, etc. Reinstatements should be requested before enrollment expires. If you do not reinstate before the expiration date, you will have 30 days from the date of expiration to reinstate. The reinstatement fee must be paid before additional lesson assignments can be submitted. If you do not reinstate within 30 days from the expiration date, a grade of F or N will be placed on your transcript. Also see Withdrawals, Cancellations, Refunds, below.

If you reinstate, a grade of I (incomplete) will be placed on your transcript. Complete your course within the one year reinstatement period and the I will be removed and a permanent grade (A-F or S-N) entered on your transcript. If you do not complete your course by the end of the reinstatement period, the I on your transcript will be changed to an F (fail) or N (no credit).

Withdrawals, Cancellations, Refunds

If you request cancellation of your course registration within six weeks of the date you registered, that course will not appear on your transcript. Students have six months from the date of registration to officially cancel registration in a course with a grade of W (official cancellation without grade) on their transcript. Cancellations must be requested in writing and are effective the date of the postmark.

Cancellations requested more than six months from the date of registration require approval from the Continuing Education and Extension Scholastic Committee. The Scholastic Committee strives to assure the integrity of student grade records by maintaining fair and consistent registration, withdrawal, and grading policies for all students. Scholastic Committee approval is granted only under extenuating circumstances. College guidelines for cancellation will be strongly con-

General Information

sidered for students who are admitted to a degree program at the University of Minnesota. Students may request a petition form by contacting the Department of Independent Study or Extension Counseling by phone or mail.

If you want to receive a partial refund of tuition, you must follow the policies outlined below.

Refunds—Part of your tuition can be refunded if you cancel within three months of the date of registration and if you have **not** submitted more than half of the lesson assignments in the course. The cost of the study guide is not refundable. The refund schedule is given below. For students who use the partial payment plan, the \$5 service fee is not refundable.

100% tuition refund less \$20 cancellation fee—registration day through day 30 (no lesson assignments submitted)

75% tuition refund—registration day through day 30 (from one lesson assignment submitted through half of the lesson assignments submitted)

50% tuition refund—day 31 through day 60 (from no lesson assignments submitted through half of the lesson assignments submitted)

25% tuition refund—day 61 through day 90 (from no lesson assignments submitted through half of the lesson assignments submitted)

No refund—day 91 +

Grade Point Average

To determine grade point average, grade points are assigned to course grades as follows: for each credit of A, four grade points; B, three grade points; C, two grade points; D, one grade point; F, zero grade points. Your grade point average is determined by dividing the sum of grade points by the sum of credits successfully completed (with grades of D or better). Credits earned in classes taken on the S-N grading system are not usually included in determining grade point average. Extension Counseling has written instructions on how to compute your grade point average; to request a copy of these instructions, call 612/625-2500.

Group Study

For groups of 20 or more students, the Department of Independent Study will, on request, investigate the possibility of coordinating a group study program. Group study consists of the basic correspondence course supplemented by lectures by an instructor, video and/or audio tapes. This method adds the dimension of group interaction without diminishing the flexibility or personal nature of Independent Study instruction. Group meetings will be arranged at a time and place convenient for the students involved. Students who want to discuss the possibility of group study should call or write the Department of Independent Study.

Health Care Courses and Programs

The Department of Independent Study administers a number of special programs in the health care field. For more information, contact the programs below.

ISP Graduate Level Study Programs for Health Care Administrators, Project Coordinator, D305, Box 97, Mayo Building, 420 Delaware St. SE, Minneapolis, MN 55455; telephone 612/624-1411; FAX 612/626-1186.

Programs: Ambulatory Care
 Hospital and Health Care
 Patient Care
 Nutrition

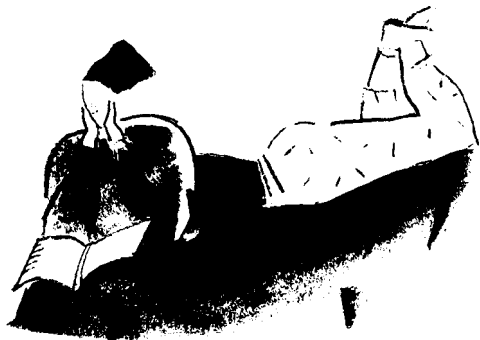
Special Interest Long Term Care
Groups: Mental Health and Chemical Dependency Administration

High School Courses

See the High School Courses section.

High School Students—PSEO College Enrollment

See the High School Courses section.



Home Video courses

See the blue section.

Immunization

Beginning July 1, 1990, students born after 1956 who will be taking more than one University class are required under Minnesota law to submit an Immunization Record form. This form, which is sent along with the official University admission letter, must be filled out and returned to Boynton Health Service within 45 days of the first term of enrollment in order for students to continue registering for classes at the University. Complete instructions accompany the form.

If you are taking Independent Study courses and are an admitted University student, this policy applies.

Lesson Service

You should allow approximately two weeks between the time a lesson assign-

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ment is received by Independent Study and the time it is placed in the return mail. Insufficient postage, no zip code, or no lesson form may delay the processing of lesson assignments beyond the two-week period. You are urged to contact Independent Study regarding any lesson assignment not returned within three weeks from the date on which it was submitted. Also, you should make a copy of each lesson assignment before you submit it so that if it is lost in the mail you can easily resubmit it to Independent Study. Do **not** send a lesson assignment directly to your instructor.

Library and Audio-Visual Facilities

In addition to the required textbooks you may purchase for your Independent Study course, you are urged to use the University libraries and your local public, school, or college library for supplemental and required reading.

University of Minnesota Libraries—Independent Study students can borrow books from University libraries. These include the St. Paul Campus Library and Walter Library (East Bank) and Wilson Library (West Bank) on the Minneapolis campus. Independent Study students are subject to all library regulations including loan periods, fines, book recalls, and course reserves. Students borrowing books in person must present a current fee statement (the student's copy of the registration form). Students who reinstate in a course must present proof of reinstatement at the library to withdraw books. Students wishing to borrow by mail should fill out the request form included with their course materials and return it to the Interlibrary Loan Division, 4 Wilson Library, 309—19th Ave. S, University of Minnesota, Minneapolis, MN 55455. Library loans by mail are subject to all library regulations and must be returned on demand. No library books can be sent overseas.

University Film and Video—This office provides audio-visual materials as learning resources for student use on a fee basis. Limited preview facilities and equipment are available on the departmental premises. For information and a catalog of available resources, contact University Film and Video, 1313 5th St. SE, Suite 108, Minneapolis, MN 55414; telephone (612) 627-4270.

Learning Resources Center—The University of Minnesota Learning Resources Center, Minneapolis campus, has cassette and reel-to-reel audio and video tapes for use in languages, music, social sciences, and other disciplines. Independent Study students are eligible to use the listening and viewing facilities upon presentation of the student's copy of the completed registration form. Please call for information on relevant course materials and hours.

Learning Resources Center
15 Walter Library
Minneapolis campus
Telephone (612) 624-1584

Minnesota College Libraries—Many Minnesota colleges and universities will

General Information

extend library privileges to Independent Study students who show a fee statement (the student's copy of the registration form). Students must abide by the regulations of these libraries. Course grades will not be issued or transferred for students who ignore library regulations.

MINITEX—Most Minnesota libraries are participants of MINITEX (Minnesota Interlibrary Telecommunications Exchange), a legislatively funded program that shares library resources. If your local library does not have a needed resource, it can generally be secured from another library. Students needing assistance in identifying or locating community library resources may call (612) 624-4002.

National University Continuing Education Association (NUCEA)

The Department of Independent Study is a member of the Independent Study Division of the National University Continuing Education Association. The division publishes an **Independent Study Catalog** that lists Independent Study courses offered by 72 colleges. It is available from Peterson's Guides, N.U.C.E.A. Book Order Department, Box 2123, Princeton, NJ 08543-2123. Write to Peterson's Guides for the cost of the Catalog. You can look at a copy of this Catalog at the Department of Independent Study, 45 Westbrook Hall, if you wish.

Office Hours

The Department of Independent Study office is open Monday through Friday, 7:45 a.m. to 4:30 p.m., throughout the calendar year. The Department does not observe regular academic holidays except for the following:

July 4, 1990	Independence Day
September 3, 1990	Labor Day
November 22, 1990	Thanksgiving Day
November 23, 1990	Friday After Thanksgiving
December 24, 1990	Christmas Holiday
December 25, 1990	Christmas
December 31, 1990	Holiday
January 1, 1991	New Year's
January 21, 1991	Martin Luther King Holiday
May 27, 1991	Memorial Day

Overseas and Foreign Students

The Department of Independent Study accepts registrations from students living or traveling in foreign countries. Since courses are available only in English, students must have sufficient knowledge of English to be able to read and write assignments without difficulty.

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The Department of Independent Study does not employ commercial agents abroad. You must pay all fees in American currency. The student must mail his/her registration form along with payment for fees, books, and other materials directly to the Department of Independent Study. Library materials, records, and certain other supplementary materials cannot be sent overseas. For complete information regarding overseas lesson assignment service, see Postage.

Partial Payment Plan

See Tuition

Plagiarism

If you submit as your own work any other person's work without proper acknowledgment, you are guilty of plagiarism. Plagiarism includes borrowing any concepts, words, sentences, paragraphs, or entire articles or chapters from books, periodicals, or speeches. In these cases, quotation marks and citations must be used. If you have any questions about proper acknowledgment, look in any English handbook.

Plagiarism also refers to copying another student's lesson assignment and submitting it for grading as if it were your own work. A student who allows another student to copy his or her lesson assignment is equally guilty of cheating.

Postage

Students pay postage on all mail sent to Independent Study. The department pays for the return of corrected lesson assignments at first class rates and the delivery of texts and materials at fourth class book rates. Overseas students should arrange for lesson assignments, texts, and materials to be sent airmail by enclosing special fees with their registration. Students must assume financial responsibility for the loss of shipments of texts and materials sent overseas. If your address does not have a U.S. zip code or an APO/FPO, you must pay for airmail delivery of texts/course materials, and lesson assignment service. Airmail delivery of texts/course materials is **at least \$30 per course**; airmail lesson assignment service is **\$12 per course (plus the \$4 handling service charge)**.

Any balance under \$1, after postage has been paid, will not be refunded. **INDICATE CLEARLY ON THE REGISTRATION FORM THE PURPOSE FOR WHICH ADDITIONAL PAYMENT OF POSTAGE IS INCLUDED.**

Students in the United States and Canada who wish texts and supplies sent first class should remit an additional \$7 per course when ordering. (See Textbooks and Supplies for instructions on ordering.) Any balance under \$1, after postage has been paid, will not be refunded.

Purchase of Study Guides

Study guides for individual courses can be purchased. To obtain the price of a study guide, mail the name of the course to Accounts Specialist, Department of Independent Study.

Radio Courses

See the blue section

Refunds

See Grades (Withdrawals)

Reinstatements

See Grades (Incompletes)

Senior Citizens in Minnesota

Minnesota residents, 62 years of age or older, may register in Independent Study noncredit courses at no cost, and in credit courses for a tuition fee of \$6 per credit. Senior citizens who enroll in credit courses for no credit (see Enrolling in Credit Courses on a Noncredit Basis) must also pay the \$6 per credit fee. Registrants are required to pay for the study guide, texts, and other required materials. For further information, telephone 612/624-0000 or write to the Department of Independent Study.

Social Security Number

The Department of Independent Study is required to obtain a student's Social Security number when he or she registers in a course. The Social Security number is now used as a common identifier for all University record systems. You should put your Social Security number on the first line of the Independent Study registration form. If you don't have a Social Security number, Independent Study can assign a nine-digit number (not a real Social Security number) that you can use as your identifying number.

Student Services

Many student services are available to Independent Study students. Participation in some of these activities is dependent on credit load per academic quarter. A list of services is given below. For more information about participating in these programs, contact the Department of Independent Study. Students who are also enrolled in Extension Classes may count Independent Study credits as part of their

General Information

total credit load. You **cannot** use your credit card to pay for student services.

Recreational facilities

Athletic tickets

Health service

Library (see Library and Audio-Visual Facilities)

Parking and bus service (inter-campus)

CEE student board/University Senate

Tapes

Also see Audio and Video Cassette Courses and Home Video courses (the blue section)

Many Independent Study courses (e.g., language courses, music courses) use cassette tapes. If cassettes are required for a course, they are listed (with an order form) in the course study guide and/or with the course description in this bulletin. A student must have access to a cassette recorder in order to enroll in these courses or must be able to listen to the tapes in the Learning Resources Center, Walter Library, Minneapolis campus. Tapes are not returnable for a refund. Minnesota residents must pay sales tax on tapes.

Tax Deductible Educational Expenses

An income tax deduction may be allowed for the expenses of University Continuing Education and Extension programs undertaken to maintain and improve professional skills. For more information about tax deductible educational expenses, persons in the Twin Cities area can call the Internal Revenue Service at 612/291-1422. Persons living outside the Twin Cities area can call (toll free) 1-800-424-1040.

Teacher Certification

See University Degree Programs section, College of Education

Television Courses

See the blue section

Textbooks and Supplies

Also see Postage

Textbooks and supplies needed for a course, and the procedure for ordering them, are explained in the study guide sent to you upon registering. Tuition does not cover the cost of books and materials. Course descriptions in this bulletin list

General Information

approximate book prices. Exact prices are given in the study guide introduction. Because text editions are frequently updated by publishers, you are encouraged to order the texts that are used in a course when you register. To do so, add the amount for the texts (given in the course description) plus a \$4 service charge per course to your tuition check. Overpayments of \$1 or more will be refunded. Allow 2-3 weeks for delivery of texts and materials. Lab kits, tapes, and special equipment are **not** returnable for refunds. Students who wish to sell their books should contact the Minnesota Book Center, Williamson Hall, University of Minnesota, 231 Pillsbury Dr. SE, Minneapolis, MN 55455; telephone 612/625-6000. Only books in current use will be purchased. Full refunds for books will be given only if a student cancels his/her course lesson registration within **three months** of the date of registration and has **not** submitted any course lesson assignments. A textbook will be considered a buyback if it has any writing in it. If a student cancels a course after three months, he/she will only receive a buyback refund from the Book Center.

Toll-Free Information Number

Independent Study now has a toll-free 800 number for use by students who live outside the Twin Cities area.

Students **outside** the Twin Cities area who want information on registration and course availability should call: 1-800-234-6564. If those students want information on partial payments, texts, lesson assignments, grades, etc., they must call the Independent Study general number: 612/624-0000.

Students who live **within** the Twin Cities should call the Independent Study general number for all information.

Transcripts and Records

Two types of services are available to obtain **official** transcripts: regular service and rush service. (Official transcripts are certified and embossed with the University's seal.) Regular service is available for \$3 a copy. Processing time for regular service is two to three working days; after processing, your copies will be mailed to the places you have specified. Rush service on your official transcript is available for \$6 a copy. Rush service guarantees your transcript will be issued to you in person or put in the mail on the same day the request is received. You must have a picture ID (student identification card or driver's license) to receive over-the-counter rush service.

Official transcripts can be requested by mail. Requests can also be dropped off at the location below. No telephone requests are accepted. Requests should include your full name, Social Security number, date of birth, dates of enrollment, and complete address(es) for mailing the transcripts. Send your requests to the Certifications Unit, 155 Williamson Hall, 231 Pillsbury Drive SE, Minneapolis, MN 55455. Your request must include a check or money order payable to the University of Minnesota for \$3 or \$6 a transcript.

General Information

You may pick up an unofficial copy of your record by presenting your request (picture ID required) at the quick-service window in 155 Williamson Hall. There is no charge for the quick-service request; however, there is a limit of one copy per day.

Independent Study grades are automatically recorded for an undergraduate on his/her University of Minnesota transcript. It is no longer necessary to request that your grades be transferred to your day school record. Graduate and professional school students still must petition for transfer of Independent Study credits to graduate or professional school records, however. Complete a "Request for Transfer" form at the Independent Study office, 45 Westbrook Hall, or at the Student Relations Unit, 150 Williamson Hall (625-5333).

A grade slip is sent to you on completion of each Independent Study course. If you want a transcript with your Independent Study grade on it, do not request a transcript until you have received your Independent Study grade slip.

Access to Student Educational Records

In accordance with regents' policy on access to student records, information about you generally may not be released to a third party without your permission. The policy also permits you to review your 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, academic awards and honors received, and degrees earned—is considered public or directory information. To prevent release of such information outside the University while in attendance at the University, you must notify the records office on your campus.

The regents' policy, including a directory of student records, is available for review at Williamson Hall, Information Center, Minneapolis campus, and at records offices on other campuses of the University. Questions may be directed to the Office of the Registrar, 150 Williamson Hall, (612) 625-5333.

Transferring to Another Course

You may transfer from one Independent Study course to another providing you do so within three months from the date of registration and prior to completing half of the lesson assignments in the course. Transfers are **not** permitted for Home Video courses. The transfer fee is \$10, plus the cost of the study guide for the old course and \$6.00 for each lesson assignment evaluated. The original tuition is applied to the tuition for the new course. For students who enrolled under the partial payment plan, the remaining payments must be paid at the time of transfer to the second course. The second course must be completed within one year from the original registration date unless the enrollment is reinstated (see Grades, In-completes). When a transfer is recommended by the Department of Independent Study, you are charged only for lesson assignments evaluated by the instructor.

General Information

Transfers are allowed only once per registration and cannot be made from one individual to another.

Tuition

Tuition for Independent Study courses is \$53.25 per credit for 0000 and 1000 level courses. The tuition for 3000 and 5000 level courses varies by school. The tuition for each course is listed with the course description. Books and materials are not included in the tuition and must be purchased separately (see Textbooks and Supplies). Checks or money orders should be made payable to the University of Minnesota. You must register for Independent Study courses directly with the Department of Independent Study; Independent Study has no commercial agents in this country or abroad. You must pay all fees in American currency.

Students registering for graduate credit (see University Degree Programs section, Graduate School) pay Independent Study tuition rates. However, when credits are transferred to a student's Graduate School record, that student will be charged the difference—if any—between Independent Study and Graduate School tuition for credits accepted on his/her program. The tuition difference charged will be the difference between the tuition rates in effect at the time the course is transferred.

Returned Check—If your tuition check is returned because of insufficient funds or a stop payment request:

1. your registration in the course will be cancelled, and
2. a hold will be placed on your record until you pay:
 - a. a \$15 check handling fee,
 - b. a \$20 course cancellation fee (if **no** lessons submitted),
 - c. 25% to 100% of tuition (depending on the number of lessons submitted),
 - d. the \$5.00 partial payment fee (if applicable)
 - e. the cost of the study guide,

Tuition and fees are subject to change without notice, and also subject to approval by the Board of Regents.

Partial Payment Plan

The Department of Independent Study offers a partial payment plan for those who cannot pay full tuition at the time of registration. This plan does not apply to television, radio, or Home Video courses, or to tuition paid for by credit card. Texts and materials ordered through the Department of Independent Study must be paid in full at the time of purchase.

Under this plan, one-third of the total tuition, plus a service charge of \$5 per course, is paid at the time of registration. The remaining two-thirds is payable in two equal monthly payments due 30 and 60 days after the date of registration.

General Information

Sample payment schedule (including \$5 service charge) for a 1000-level course is given below.

Tuition	1st pmt (at registration)	2nd pmt (30 days)	3rd pmt (60 days)
\$159.75 (3 cr @ \$53.25/cr)	\$58.25	\$53.25	\$53.25
\$213 (4 cr @ \$53.25/cr)	\$76	\$71	\$71
\$266.25 (5 cr @ \$53.25/cr)	\$93.75	\$88.75	\$88.75

Lesson assignments will be accepted only through that third of the course for which tuition has been paid. For example, a student enrolled in a 12-lesson course will not receive instruction beyond lesson four if he/she has made only the first payment.

Registration will be cancelled if total tuition has not been paid within 90 days of the original registration date unless special permission has been obtained from the Administrator of the Department of Independent Study. Once registration has been cancelled, you may continue a course only by reenrolling.

Students who want to use the partial payment plan should fill in the appropriate space on the registration form and send it, along with the service charge, the first payment, and any other special fees, to the Department of Independent Study.

Refunds—See Grades (Withdrawals)

Reinstatements—See Grades (Incompletes)

University Without Walls and Inter-college Program

See Degree Programs, University College

Video Cassette Courses

See the blue section

Withdrawals

See Grades

Extension Certificate Programs

Continuing Education and Extension offers several certificate programs consisting of degree-credit courses or a combination of degree and certificate-credit courses. Students entering these programs should have adequate educational preparation or other experience that qualifies them to work with college-level material. The certificate-credit courses represent an accelerated and specialized approach to subject matter. They are not, however, transferable to a degree program.

Some certificate programs are regarded by business and industry as valuable professional and technical preparation for employment and promotion. Students whose career plans require college training, but who cannot devote the time necessary to earn a degree, may want to consider a certificate program. Students are encouraged to consult with employers regarding the usefulness of the certificate in seeking new employment or possible promotional opportunities. With careful planning, some certificates can be a stepping-stone to a degree program. Work on most certificates may be done through a combination of Independent Study, Extension Classes, day school, or summer session.

Degree and certificate programs **may change or be discontinued**. The University will make every reasonable effort to assist admitted students in completing a program.

Students may transfer credits from other accredited institutions, although a minimum of 25 percent of the credits required for any certificate must be earned through the University of Minnesota. The residency requirement cannot be met by repeating courses at the University of Minnesota that have already been successfully completed at another institution. Courses need not be taken in order except as prerequisites make it necessary.

Certificate requirements are subject to modification. There is no time limit on the use of credits. Students may not be enrolled in more than three certificates at one time. Students interested in taking courses toward certificate programs on the S-N grading system should first consult an Extension advisor at 612/625-2500.

Application—Students can obtain a copy of "Certificate Program Information" with an application form by contacting the Extension Counseling Department, 625-2500, 314 Nolte Center. A nonrefundable \$15 application fee will be required with all applications. Students are urged to consult with an adviser early in their programs, before completing an application for admission, regarding application time, admissibility to a certificate program, residency requirements, and specific admission information for each certificate.

Certificate Programs

Admission criteria vary among certificate programs. Admission decisions are based on previous college performance (usually better than a C average is required), educational objectives, and patterns of coursework completed. Students will be notified of admission status by mail approximately three weeks after all transcripts and application materials are received.

Completion—A student nearing completion of the required work and expecting to receive a certificate, must file a Certificate Completion form when registering for his/her last course. A \$16 nonrefundable certificate fee is required at the time the Certificate Completion form is filed. There is a quarterly deadline for filing this form. Upon completion of a specified program with at least a C (2.0) overall grade average (including a 2.00 grade point average in University of Minnesota coursework), the student is awarded a certificate. Certificates are awarded by Continuing Education and Extension, not by individual colleges of the University of Minnesota. All certificates are dated and awarded as of each quarter of the academic year.

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-F grading system. Colleges at the University retain the right to determine honors requirements for a degree; earning a certificate with honors does not automatically gain a student entry into a college's honors program.

For information about certificate programs, including transfer of credits, contact the Extension Counseling Office, 314 Nolte Center, 315 Pillsbury Drive SE, University of Minnesota, Minneapolis, MN 55455; 612/625-2500.

Courses or course sequences now available or soon to be available through Independent Study are followed by an asterisk (*).

Extension Certificates—Group I

Group I certificates can be earned entirely through Independent Study.

General Studies Certificate (45 credits)

The General Studies Certificate will be **discontinued as of II summer session, 1991**. Students who wish to complete this certificate must complete all required coursework and file a formal application for completion **by that time**. Students who plan to complete this certificate, but who have not yet made formal application, should contact Extension Counseling immediately at 612/625-2500.

Liberal Arts Certificate (45 credits)

The Liberal Arts Certificate program offers students an introduction to a liberal arts education and is equivalent to one year of University study. The certificate can constitute the freshman year of a degree program in liberal arts or business, if carefully planned. A minimum of **50 percent** of all coursework (23 credits) must be taken on the A-F grading system.

Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University.

English Requirement (5-8 credits)

Comp 1011—Writing Practice I*

Core Requirement (32 credits) Eight 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 are required for a total of 45 credits for the certificate. Before taking courses applicable to this certificate, students should obtain a copy of CLA courses offered through Continuing Education and Extension that meet the Group Distribution Requirements. Contact the Extension Counseling Department, 314 Nolte Center, 315 Pillsbury Dr. SE, Minneapolis, MN 55455; telephone (612) 625-2500.

Mathematics and Science Certificate (45 credits)

The Mathematics and Science Certificate provides students with the fundamentals of mathematics and science, and is the equivalent of one year of University study. The credits earned in this certificate program can be used toward a degree in either the College of Liberal Arts or the Institute of Technology (depending on the choice of electives).

A minimum of **50 percent** of all coursework (23 credits) must be taken on the A-F grading system. Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University.

Important note—as this bulletin was being published, the math courses at the University were being renumbered and reorganized. If you are pursuing a degree or certificate, contact Extension Counseling (612/625-2500) for assistance in planning your sequence of math courses.

Prerequisite: Two years of algebra and two years of geometry, including trigonometry

Certificate Programs

Core Requirement (25-28 credits)

Comp 1011—Writing Practice I*
Math 1211—Calculus I*
Math 1221—Calculus II*

Math 1231 or Math 1241**—Calculus III*
Math 3311—Multivariable Calculus*

Electives: Additional credits for a total of 45 credits, selected from the following areas.

Aerospace Engineering and Mechanics
Astronomy
Biology
Botany
Chemistry

Ecology
Engineering
Geology
Microbiology
Physics

**Math 1241 is required for Institute of Technology degrees.

Extension Certificates—Group II

Group II certificates can be partially completed through Independent Study, but require additional credits from day school, Extension classes, or transferred credits.

Undergraduate Development Certificates in Accounting

The accounting certificates can be of value to individuals in junior accounting positions in industry, to management personnel who are required to deal with common finance and accounting data, and to business people who wish to have a basic understanding of the elementary principles of accounting and corporation finance. The Level II certificate provides a background for additional study in preparation for the Certified Public Accountant and Certified Management Accountant examinations. In most cases, students who work toward the certificate have already completed a bachelor's degree. Students who do not have a bachelor's degree should consider the accounting program in the Bachelor of Science in Business degree as a preferable alternative.

Admission to Undergraduate Development Certificates in Accounting—To be considered for admission, students must have completed the equivalent of a minimum of 90 quarter college credits with a minimum of a B- grade average. Students who have completed a bachelor's degree will be individually reviewed, with particular emphasis on coursework in their junior and senior years.

Note—Upper division management courses (i.e., 3000 or 5000 level) in CEE are taught with the expectation that, in addition to having completed all pre-management coursework, students either will have earned a B- grade average in 90 credits of college level work or will have already completed a bachelor's degree.

As this bulletin was being published, the Accounting Department was renumbering and reorganizing the accounting curriculum. If you are pursuing these certificates and have questions about coursework and requirements, call Extension Counseling at 612/625-2500.

Certificate Programs

Level I (61-64 credits)

Students transferring credits to this program from other accredited institutions must take a minimum of 16 credits in accounting at the University.

Core Requirements

Comp 1011—Writing Practice I*	Acct 3201—Intermediate Management Accounting
Comp 1027—Intermediate Expository Writing or Comp 3022—Critical Thinking and Writing for Management***	Math 1111—College Algebra and Analytic Geometry*
Econ 1101, 1102—Principles of Microeconomics and Macroeconomics*	Math 1142—Short Calculus* or Math 1211— Calculus I*
Acct 1050 (formerly 1024-1025)—Introduction to Financial Reporting	IDSc 1010—Fundamentals of Information Development and Use
Acct 3001—Introduction to Management Ac- counting	OMS 1020—Data Analysis and Statistical In- ference for Managers**
Acct 3101-5102—Intermediate and Advanced Fi- nancial Reporting	IDSc 3030—Information Systems and Infor- mation Management**

**Students who eventually plan to pursue a degree through the Carlson School of Management or who have already taken DSci 1050 or MIS 3100 should consult an Extension counselor regarding this requirement.

***Students who plan to pursue a B.S. in Business should take Comp 3022.

Level II (89-92 credits)

Students transferring credits to this program from other accredited institutions must take a minimum of 24 credits in accounting at the University of Minnesota.

Core Requirements (77-80 credits)

Comp 1011—Writing Practice I*	Econ 1101, 1102—Principles of Microeco- nomics and Macroeconomics*
Comp 1027—Intermediate Expository Writing or Comp 3022—Critical Thinking and Writing for Management***	Acct 1050 (formerly 1024-1025)—Introduc- tion to Financial Reporting
Math 1111—College Algebra and Analytic Ge- ometry*	Acct 3001—Introduction to Management Ac- counting
Math 1142—Short Calculus* or Math 1211—Cal- culus I*	Acct 3101-5102—Intermediate and Ad- vanced Financial Reporting
IDSc 1010—Fundamentals of Information Devel- opment and Use	Acct 3201—Intermediate Management Ac- counting
OMS 1020—Data Analysis and Statistical In- ference for Managers**	12 credits of accounting electives
IR 3002—Personnel and Industrial Relations*	IDSc 3030—Information Systems and Infor- mation Management**

**Students who eventually plan to pursue a degree through the Carlson School of Management or who have already taken DSci 1050 or MIS 3100 should consult an Extension counselor regarding this requirement.

***Students who plan to pursue a B.S. in Business should take Comp 3022.

Electives (12 credits)

BFin 3000—Finance Fundamentals*	Mgmt 3001—Fundamentals of Management
BGS 3004—International Business*	Mgmt 3004—Business Policy: Strategy For- mulation and Implementation
BLaw 3058—Business Law: Contracts*	

Certificate Programs

Ins 5100—Risk Management and Insurance
LM 3000—Introduction to Logistics Management
Mktg 3000—Principles of Marketing*
Econ 3105—Managerial Economics

OMS 3000—Introduction to Operations Management
BGS 3002—Business and Society

Undergraduate Development Certificates in Business Administration

The Undergraduate Development Certificates in Business Administration have been approved by the Carlson School of Management and arranged under the supervision of its faculty. They present integrated, high-quality, university-level programs of shorter length and scope than four-year degree programs. They are designed for students who need an understanding of the principles and theories of business administration, and for those who want training or an opportunity for advancement in some specific field of business.

Students admitted to Undergraduate Development Certificates in Business Administration are usually working toward a Bachelor of Science in Business degree or have already completed a bachelor's degree in another area. It is possible, with careful planning, for a student to move from a course of study for a certificate into a planned program leading to a Bachelor of Science in Business degree. Anyone who contemplates such a long-range objective should consult an Extension adviser, who can monitor your progress carefully.

Admission to Undergraduate Development Certificates in Business Administration—To be considered for admission, students must have completed the equivalent of a minimum of 90 quarter college credits with a minimum of a B – grade average. Students who have completed a bachelor's degree will be individually reviewed, with particular emphasis on coursework in their junior and senior years.

Note—Upper division management courses (i.e., 3000 or 5000 level) in CEE are taught with the expectation that, in addition to having completed all pre-management coursework, students either will have earned a B – grade average in 90 credits of college level work or will have already completed a bachelor's degree.

Level I Business Administration Certificate (49-52 credits)

This certificate represents the equivalent of one academic year of study in business. It offers a background in the basic fields of business administration. All the credits received in completing the Level I Certificate are credited toward a Level II Certificate and represent half of its required work load.

All courses must be taken on the A-F grading system. Students transferring credits from other accredited institutions to this program must take a minimum of 12 credits in business courses from the Core Requirement at the University.

Certificate Programs

Pre-management Requirement (37-40 credits)

Comp 1011—Writing Practice I*
Econ 1101, 1102—Principles of Microeconomics and Macroeconomics*
Acct 1050 (formerly 1024-1025)—Introduction to Financial Reporting
Math 1111—College Algebra and Analytic Geometry*

IDSc 1010—Fundamentals of Information Development and Use
OMS 1020—Data Analysis and Statistical Inference for Managers**
Psy 1001—Introduction to Psychology*

**Students who eventually plan to pursue a degree through the Carlson School of Management or who have already taken DSci 1050 should consult an Extension counselor regarding this requirement.

Core Requirement (12 credits) At least three courses selected from the following to total 12 credits

Acct 3001—Introduction to Management Accounting
BLaw 3058—Business Law: Contracts*
IR 3002—Personnel and Industrial Relations*
Ins 5100—Risk Management and Insurance*
Mgmt 3004—Business Policy: Strategy Formulation and Implementation*
Econ 3105—Managerial Economics
BGS 3002—Business and Society
BGS 3004—International Business*

IDSc 3030—Information Systems and Information Management
Mgmt 3001—Fundamentals of Management
Math 1142—Short Calculus* or Math 1211—Calculus I*
LM 3000—Introduction to Logistics Management
BFin 0001C—Introduction to Investments
BFin 3000—Finance Fundamentals*
Mktg 3000—Principles of Marketing*

Level II Business Administration Certificate (90 credits)

The Level II Business Administration Certificate is a continuation of the Level I Certificate. The completion of the certificate approximates the second and third years of a four-year degree program, with emphasis on the basic principles and theories of business administration.

Students who are contemplating continuing toward a degree from the Carlson School of Management should consult an Extension adviser **before** they begin working toward the Level II Business Administration Certificate.

Only nonbusiness 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 in business courses (not including the pre-management requirement) at the University.

Pre-management Requirement (42-45 credits)

Comp 1011—Writing Practice I*
Econ 1101, 1102—Principles of Microeconomics and Macroeconomics*
Acct 1050 (formerly 1024-1025)—Introduction to Financial Reporting
Math 1111—College Algebra and Analytic Geometry*

Math 1142—Short Calculus* or Math 1211—Calculus I*
IDSc 1010—Fundamentals of Information Development and Use, and OMS 1020—Data Analysis and Statistical Inference for Managers**
Psy 1001—Introduction to Psychology*

**Students who eventually plan to pursue a degree through the Carlson School of Management or who have already taken DSci 1050 should consult an Extension counselor regarding this requirement.

Certificate Programs

Core Requirement (24 credits) At least six courses selected from the following to total 24 credits

Acct 3001—Introduction to Management Accounting

IR 3002—Personnel and Industrial Relations*

Ins 5100—Risk Management and Insurance*

LM 3000—Introduction to Logistics

BGS 3002—Business and Society

BGS 3004—International Business*

BFin 0001C—Introduction to Investments

BFin 3000—Finance Fundamentals*

BLaw 3058—Business Law: Contracts*

Econ 3015—Managerial Economics

Mktg 3000—Principles of Marketing*

Mgmt 3001—Fundamentals of Management

Mgmt 3004—Business Policy: Strategy Formulation and Implementation*

IDSc 3030—Information Systems and Information Management

OMS 3000—Introduction to Operations Management

Electives in the Carlson School of Management: At least 16 additional credits in business. These should be selected in consultation with an Extension counselor.

Other Electives: Satisfactory completion of pre-management degree requirements in Physical and Biological Sciences, Individual and Society, or Literary and Artistic Expression, for a total of 90 credits.

Note: Students considering a degree from the Carlson School of Management should choose electives that could become part of the degree program. Such students should contact the Department of Independent Study for a list of the pre-management courses offered through Independent Study that meet the requirements of the Carlson School of Management and should also contact the Extension Counseling Office early in their program.

Credit and Financial Management Certificate (66-67 credits)

The Credit and Financial Management Certificate program was developed cooperatively by Continuing Education and Extension, the Carlson School of Management, and the National Association of Credit Management. The program prepares students for careers in trade credit management, loan management, and financial management.

All courses must be taken on the A-F grading system, with the exception of Composition and Speech, which may be taken on the S-N grading system. Students transferring credits to this program from other accredited institutions must take a minimum of 16 credits at the University.

Admission to the Credit and Financial Management Certificate—To be considered for admission, students must have completed the equivalent of a minimum of 90 quarter college credits with a minimum of a B- grade average. Students who have completed a bachelor's degree will be individually reviewed, with particular emphasis on coursework in their junior and senior years.

Completion of the certificate qualifies students, in part, for the Associate and Fellow Awards of the National Institute of Credit. Persons interested in these awards should contact Lois M. Bell, City Place Building, Suite 600, 730 Hennepin Ave., Minneapolis, MN 55403, telephone 612/341-9615, for further information.

Note—Upper division management courses (i.e., 3000 or 5000 level) in CEE are taught with the expectation that, in addition to having completed all pre-management coursework, students either will have earned a B- grade average in 90 credits of college level work or will have already completed a bachelor's degree.

Certificate Programs

For more information about working toward this certificate, contact Extension Counseling.

Core Requirement (57 credits)

Acct 1050 (formerly 1024-1025)—Introduction to Financial Reporting
Acct 3001—Introduction to Management Accounting
Acct 3101—Intermediate Financial Reporting
BLaw 3058-3078, 3088—Business Law*
Econ 1101, 1102—Principles of Microeconomics and Macroeconomics*

IR 3002—Personnel and Industrial Relations*
Mgmt 3002—Psychology in Management
Mktg 3000—Principles of Marketing*
Comp 1011—Writing Practice I*
Spch 1101—Fundamentals of Speech Communication: Oral Communications
BFin 3000—Finance Fundamentals*

Electives (8 credits)

Acct 3201—Intermediate Management Accounting
BFin 3100—Financial Management
Econ 3701/5721—Money and Banking*
Ins 5100—Risk Management and Insurance
Mgmt 3001—Fundamentals of Management

LM 3000—Introduction to Logistics Management
BFin 3601—Bank Financial Management
GC 3732—Consumer Transactions and the Law



Industrial Relations Certificate (45 credits)

The Industrial Relations Certificate was developed by the Industrial Relations Center of the Carlson School of Management. It provides technical training in industrial relations and in the use of specialist techniques. Advanced professional training in industrial relations is available only through the day and evening M.A. program and the Ph.D. program.

Students may use S-N grading for Psy 3801 and nonbusiness electives, up to a **maximum of 12** credits toward the certificate. Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits in Industrial Relations at the University.

Certificate Programs

Note—Upper division management courses (i.e., 3000 or 5000 level) in CEE are taught with the expectation that, in addition to having completed all pre-management coursework, students either will have earned a B – grade average in 90 credits of college level work or will have already completed a bachelor's degree. Courses at the 3000-level are primarily for juniors and seniors. Courses at the 5000-level are primarily for juniors, seniors, and graduate students.

Core Requirement (33 credits)

Econ 1101, 1102—Principles of Microeconomics and Macroeconomics*
IR 3002—Personnel and Industrial Relations*
IR 3007—Collective Bargaining and Labor Relations*

IR 3010—The Individual and the Organization
Psy 1001—Introduction to Psychology*
Psy 3801—Introduction to Statistical Methods
Soc 1001—Introduction to Sociology*

Electives (12 credits)

Econ 3501 or 5531—Labor Economics
Econ 5541—Contemporary Labor Issues
Econ 5534—Economics Security*
Econ 5537—Labor Market Behavior and Regulations*
Econ 5561—Wages and Employment
IR 0001C—Supervision I*
IR 3012—Systems of Industrial Relations: Human Resource Management*
IR 3000—Topics in Industrial Relations
IR 5000—Topics in Industrial Relations
IDSc 3030—Information Systems and Information Management
Mgmt 3002—Psychology in Management
OMS 5160—Deterministic Modeling and Optimization

Psy 3124—Psychology of Individual Differences
Psy 3201—Introduction to Social Psychology
Psy 5045—Psychology of Motivation
Psy 3011—Introduction to Psychology of Learning
Psy 5501—Vocational Psychology
Psy 5701—Personnel and Industrial Psychology
Psy 5703—Psychology of Organizational Training and Development
Soc 5201—Introduction to Social Psychology*
Soc 5411—Formal Organizations

Management of Administrative Services Certificates

The Management of Administrative Services Certificate programs have been developed by Continuing Education and Extension with the Carlson School of Management and the Administrative Management Society.

These college-level certificate programs provide management training. Their purpose is to assist employees to become more competent in their present positions and improve their opportunity for advancement.

Admission to the Management of Administrative Services Certificate—To be considered for admission, students must have completed the equivalent of a minimum of 90 quarter college credits with a minimum of a B – grade average. Students who have completed a bachelor's degree will be individually reviewed, with particular emphasis on coursework in their junior and senior years.

Note—Upper division management courses (i.e., 3000 or 5000 level) in CEE are taught with the expectation that, in addition to having completed all pre-management coursework, students either will have earned a B – grade average in 90 credits of college level work or will have already completed a bachelor's degree.

Certificate Programs

Associate in Management of Administrative Services Certificate (54 credits)

Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits in business courses at the University.

Core Requirement (43-47 credits)

Comp 1011—Writing Practice I*, or GC 1531—Business Writing*, or Comp 0003C—Review of Business English

Econ 1101, 1102—Principles of Microeconomics and Macroeconomics*

Math 1111—College Algebra and Analytic Geometry*

Math 1131—Finite Mathematics

IDSc 1075—Elementary COBOL

Acct 1050 (formerly 1024-1025)—Introduction to Financial Reporting

Acct 3001—Introduction to Management Accounting

BLaw 3058—Business Law: Contracts*

Psy 1001—Introduction to Psychology*

IDSc 1010—Fundamentals of Information Development and Use

OMS 1020—Data Analysis and Statistical Inference for Managers

Electives: An additional course selected from the Requirements or Electives for the Fellow Certificate (below) for a total of 54 credits.

Fellow in Management of Administrative Services Certificate (90 credits)

Students transferring credits to this program from other accredited institutions must take a minimum of 24 credits in business courses at the University.

Core Requirement (43-47 credits)

Comp 1011—Writing Practice I*, or Comp 0003C—Review of Business English and GC 1531—Business Writing*

Econ 1101, 1102—Principles of Microeconomics and Macroeconomics*

Acct 1050 (formerly 1024-1025)—Introduction to Financial Reporting

Acct 3001—Introduction to Management Accounting

BLaw 3058—Business Law: Contracts*

Math 1111—College Algebra and Analytic Geometry*

Math 1131—Finite Mathematics

IDSc 1075—Elementary COBOL

Psy 1001—Introduction to Psychology*

IDSc 1010—Fundamentals of Information Development and Use

OMS 1020—Data Analysis and Statistical Inference for Managers

Group Requirements (36 credits)

Group I: At least four courses from the following (16 credits)

IR 3002—Personnel and Industrial Relations*

Mgmt 3002—Psychology in Management

BFin 0001C—Introduction to Investments

BFin 3000—Finance Fundamentals*

Ins 5100—Risk Management and Insurance*

Mktg 3000—Principles of Marketing*

Group II: At least five courses from the following (20 credits)

BFin 3100—Financial Management

LM 3000—Introduction to Logistics Management

Acct 3001—Introduction to Management Accounting

IR 3010—Human Relations and Applied Organization Theory

IR 3012—Systems of Industrial Relations: Human Resource Management*

Certificate Programs

Acct 3255—Managerial Costs, or Acct 3201—
Cost Accounting
Acct 3101—Intermediate Financial Reporting

Mgmt 3001—Fundamentals of Management
BLaw 3088—Business Law*

Electives: Additional credits from the following courses or areas for a total of 90 credits

IR 0001C-0002C—Supervision I*-II
Psy 5751—Psychology of Advertising
Accounting
Economics
Finance
Production
Management
Industrial Relations

Insurance
Marketing
Logistics Management
English
Humanities
Social Science
Speech

Undergraduate Development Certificate (UDC) Series

Developed with the Institute of Technology, the UDC Series provides a plan for continuing education in particular disciplines and recognizes completion of an educational program indicative of increasing levels of technical capability. With departmental approval, degree-credit courses offered in certificate programs may be applied toward a subsequent baccalaureate degree. This requires early contact with the academic department and application for admission to the Institute of Technology.

The UDC in Engineering and Science—45 Credits (described below) is the initial required program in the UDC Series. It indicates familiarity with basic science and engineering topics and is equivalent to the first year of college study. After completing the UDC in Engineering and Science—45 Credits, students can continue in particular disciplines through the UDC—90 Credits or the UDC—135 Credits. (The UDC—135 Credits is only available in Electrical Engineering.)

Important note—As this bulletin was being published, math courses at the University were being renumbered and reorganized. If you are pursuing these certificates or a degree in the Institute of Technology, contact an Extension Counselor (612/625-2500) for assistance in planning your sequence of math courses.

Students interested in a listing of the Undergraduate Development Certificates or in additional information concerning them, should contact the Extension Counseling Office.

Undergraduate Development Certificate in Engineering and Science—45 Credits

The UDC in Engineering and Science—45 Credits provides students with the fundamentals of mathematics, physics, and broad technical communications skills that enable them to handle support assignments in any engineering field. In addition, it gives them background for more specialized or advanced study either as

Certificate Programs

an engineer or engineering technician. All courses in the UDC in Engineering and Science—45 Credits carry degree credit and are applicable to a baccalaureate degree.

Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits from the Core Requirements at the University.

Prerequisite: High school graduate or equivalent; 2 years of algebra and 2 years of geometry, including trigonometry.

Core Requirements (34-37 credits)

Math 1211—Calculus I*

Math 1221—Calculus II*

Math 1231 or 1241**—Calculus III*

ME 1025—Engineering Graphics*, or CSci

3101—A Fortran Introduction to Computer

Programming or CSci 3104—Introduction

to Programming and Problem Solving

Phys 1271*-1275-1281*-1285—General Physics and Lab

Comp 1011—Writing Practice I*

Electives: Courses from nontechnical electives for a total of 45 credits. Nontechnical electives may be chosen from the following fields: anthropology, biological sciences, botany, classics, economics, geography, history, humanities, languages (except scientific language courses), literature, music theory, philosophy, political science, psychology, religion, social science, sociology, speech, zoology, and others. (See the current bulletin of the Institute of Technology.)

**Math 1241 is required for Institute of Technology degrees.

University Degree Programs

Through Independent Study, it is possible to earn credits that can be used in a variety of degree programs at the University. **There are limitations, however, on the use of Independent Study credits in degree programs in certain departments or individual schools.** If you wish to apply credits earned through Independent Study to a University degree program, you are urged to consult an advisor at Extension Counseling (612/625-2500) or your college office before enrolling.

It is important to plan coursework and to follow University procedures when working on a degree. If you have never been admitted to the University but wish to work toward a University degree, you should contact the Extension Counseling Office early in your planning. It is also essential to read the official bulletin of the college to which you wish to be admitted. College bulletins can be obtained by writing the Bulletin Room, 110 Williamson Hall, 231 Pillsbury Dr. SE, University of Minnesota, Minneapolis, MN 55455, or calling 612/625-3030.

College of Education

1425 University Ave. SE

Because of the variety of programs offered in the College of Education, it is not possible to present a specific curriculum or to indicate appropriate Independent Study courses.

Students can use the two-year program listed under the College of Liberal Arts as a guide in completing many of the preprofessional requirements of the College of Education. Some Independent Study courses in education are acceptable in College of Education programs. For more information, write to the College of Education, 1425 University Ave. SE, Minneapolis, MN 55414, or call 612/625-1550.

Teacher's Certificate

Most Independent Study courses can be used in the acquisition and renewal of teachers' certificates. However, the Department of Independent Study **does not evaluate teaching or education experience for a certificate or recommend courses.**

Questions concerning teacher certification should be directed to the State De-

Degree Programs

partment of Education or a similar agency (in Minnesota—Director of Certification and Placement, Capitol Square Building, 550 Cedar St., St. Paul, MN 55101, 612/296-2046).

General College

40 Appleby Hall, Minneapolis campus

In January 1986, the Regents of the University of Minnesota voted to discontinue the awarding of 2-year degrees at all University campuses except Crookston and Waseca. The General College will continue to offer the Associate in Arts degree for students who have been formally admitted to the General College, but such students **must** have completed all requirements for the degree by **September 15, 1991**.

For students admitted to the General College who intend to work toward an associate's degree, the following guidelines continue to be in force.

Associate in Arts Degree (A.A.)

In the belief that an Associate in Arts (A.A.) degree should give students the basic tools, general knowledge, desire, and confidence to continue learning, prepare for a career, and behave responsibly in society, the faculty of the General College, in June 1981, adopted recommendations made by the curriculum committee for a new definition of the degree. Beginning in fall 1983, students admitted to the General College who plan to complete an A.A. degree must fulfill these requirements, designed to enable them to attain three outcomes:

Outcome I: Reading, Writing, Mathematics, and Research Skills. Competence may be demonstrated by any of the following: satisfactory achievement on diagnostic examinations; completion of General College courses emphasizing these skills, with a grade of C6 or better; completion of certain degree credit courses demonstrating minimum proficiency in these skills, with a grade of C6 or better.

Outcome II: Liberal Education. At least 60 of the 90 credits required for an A.A. degree must be distributed throughout the liberal arts and sciences as defined by the Council on Liberal Education (CLE). Some of these credits may also be used to fulfill requirements for Outcomes I and III. Broad understanding and general knowledge of the liberal arts and sciences and their integrative nature, unique language and structure, and unifying principles and concepts may be demonstrated by the following: completion of at least 8 credits with a grade of C6 or better in each of the four CLE groups, with at least 15 credits in General College courses, and/or completion of two quarters of interdisciplinary studies courses (e.g., *Toward a Good Life*, *Conflict Resolution*), which are designed to introduce students to the broad, integrative nature of knowledge, with a grade of C6 or better.

Outcome III: Knowledge Use and Application. The ability to use information and apply principles, techniques, and skills in actual or simulated experiences or processes may be demonstrated by satisfactory completion of a total of 10 credits,

Degree Programs

drawn from a variety of experiences in the following areas: internships (community service, co-op education, or counseling); career/personal/educational exploration and development courses; specialty courses in postsecondary certificate programs; courses that emphasize applying or acquiring knowledge by engaging a student in actual or simulated experiences or processes; major projects demonstrating practical application of concepts or problem solving documented by a student and an instructor in a relevant field; and/or documented, assessed prior life experience, such as experiential learning and training, or other life activity (direct involvement in community agencies, businesses, civic endeavors) accepted by the General College.

Bachelor of Applied Studies (B.A.S.)

Bachelor of General Studies (B.G.S.)

In January 1986, the Regents of the University of Minnesota voted to discontinue baccalaureate degree programs in the General College, effective at the end of the second summer session, 1991. In accordance with that action, students are no longer being accepted into either the Bachelor of Applied Studies (B.A.S.) or the Bachelor of General Studies (B.G.S.) programs.

Students admitted to the General College by fall, 1985, who have been accepted into the B.A.S. or B.G.S. program and who are currently pursuing studies toward those degrees, must complete all program requirements for their degrees by the end of second summer session, 1991.

Independent Study courses do apply toward the B.A.S. or the B.G.S. degrees; however, **it is not possible to earn a B.A.S. or B.G.S. degree entirely through Independent Study.**

Graduate School

316 Johnston Hall, Minneapolis campus

Credits earned through most Department of Independent Study courses are not accepted for graduate credit in the University of Minnesota Graduate School. Specified broadcast television courses, at the graduate level, are available for graduate credit (information is given in the course study guide). Exceptionally, FSoS 5230 (American Families in Transition) can be used toward the M.Ed. Home Video courses do **not** carry graduate credit. Independent Study courses may be used, however, to satisfy undergraduate prerequisites for Graduate School admission, to complete the graduate language requirement, or to acquire additional background in particular subject areas.

Institute of Technology

105 Lind Hall, Minneapolis campus

The Institute of Technology grants degrees in several fields of engineering and

Degree Programs

science. In addition to required mathematics and science courses, the Institute of Technology requires 36 credits of liberal education distributed as outlined in the **Institute of Technology Bulletin**. As well as some of the technical courses, Department of Independent Study courses may be used to satisfy the liberal education requirement. A minimum of 90 credits of on-campus coursework would be necessary for any IT degree. **It is not possible to complete an entire degree in the Institute of Technology through the Department of Independent Study.**

Assistance in planning a course of study and an evaluation of transfer credits is available by appointment at the Extension Counseling Office.

Carlson School of Management

290 Hubert H. Humphrey Center, Minneapolis campus

Approximately half of the course requirements for the Bachelor of Science in Business (BSB) are available through the Department of Independent Study. **It is not possible to complete the entire BSB degree through the Department of Independent Study.** The Carlson School of Management will accept a maximum of 16 credits of upper division (3000- and 5000-level) business course work completed through correspondence study toward the BSB degree. Interested students should arrange for early consultation by contacting the Extension Counseling Office at 612/625-2500.

Both the accounting and the general management programs are outlined in the **Carlson School of Management Bulletin**. For a list of the pre-management and management courses offered through Independent Study that meet Carlson School of Management requirements, write or call Extension Counseling. A copy of Procedures for Obtaining the Bachelor of Science in Business Degree through Extension may also be obtained through Extension Counseling.

Note—Students taking Carlson School of Management upper division undergraduate courses (3000 or 5000 level) are expected to have completed the equivalent of 90 quarter credits with a minimum of a B – grade average.

College of Liberal Arts

214 Johnston Hall, Minneapolis campus

A copy of the **College of Liberal Arts Bulletin** is essential for students planning to earn B.A., B.S., B.F.A., B.M., or B.I.S. degrees. Students should contact the Extension Counseling Office for a list of Extension Independent Study courses that can be used to satisfy CLA distribution requirements or for further information on any of the CLA programs.

The Department of Independent Study offers sufficient courses to earn approximately the first 90 credits toward a B.A., B.S., or B.I.S. degree. **It is not possible to complete these degrees entirely through Independent Study.**

Degree Programs

Associate in Liberal Arts (A.L.A.)

The College of Liberal Arts no longer offers the A.L.A. degree as a primary goal for students entering the college. The degree may be granted only by special petition. Students who want information about the A.L.A. degree should contact 114 Johnston Hall (624-4545).

Bachelor of Arts (B.A.)

Candidates for the Bachelor of Arts degree must complete a minimum of 180 acceptable credits, 72 in 3000- and 5000-level courses (with a minimum of 45 credits graded A, B, or C in CLA courses). No more than 12 credits of D-graded work may be applied toward the 180-credit degree requirement. Students also must satisfy the English Composition, second language, world studies, U.S. cultural pluralism, and group distribution requirements. Finally, B.A. candidates must complete a major sequence in the field of their choice and complete at least 28 credits in 3000- and 5000-level courses from areas outside their majors. (Interdepartmental majors are exempt from this 28-credit requirement.) The Department of Independent Study offers sufficient courses to earn at least the first 90 credits toward a B.A. degree.

Bachelor of Science (B.S.)

The Bachelor of Science degree is offered in CLA by the departments of Child Psychology, Communication Disorders, Economics, Geography, Sociology, and the Urban Studies program. Its requirements are substantially those of the B.A. program except that the second language, world studies, and U.S. cultural pluralism requirements are not included, and the major may be more extensive and concentrated. For further information contact the Extension Counseling Office at 612/625-2500.

Bachelor of Individualized Studies (B.I.S.)

The Bachelor of Individualized Studies degree is offered for students who want to propose an individualized program of studies based on personal academic objectives. Proposals must be evaluated and approved by at least two faculty advisers. Candidates for the Bachelor of Individualized Studies degree must complete a minimum of 180 acceptable credits. The Department of Independent Study offers sufficient courses to earn at least the first 90 credits toward a B.I.S. degree. For further information, contact the Extension Counseling Office at 612/625-2500.

University College

317 Walter Library, Minneapolis campus

University College offers two bachelor's degree programs, each of which enables students to design their own Bachelor of Arts or Bachelor of Science degree and

Degree Programs

to incorporate large amounts of learning done through the Department of Independent Study. Information is available from the college office or from the appropriate program office (see below).

Inter-College Program (ICP) is a student-designed, credit-based alternative to traditionally structured degree majors. Since 1930 it has allowed students to design an intercollegiate or interdisciplinary program suited to their individual objectives. There is no fixed curriculum, and a student may draw on the entire University for courses to prepare a degree plan leading to a BA or BS degree. With careful planning, it is possible to complete a baccalaureate degree in Inter-College Program through the Department of Independent Study. ICP works best with students who have already completed 2-3 years of college or have about 120-130 credits. A limitation to completing an ICP degree via Independent Study is the number of courses available.

The Inter-College Program application process includes preparing a carefully conceived statement of goals and a proposed course list. Students generally spend several weeks planning their degree programs, a process that requires meetings with ICP academic advisers and University faculty advisers.

The Program for Individualized Learning (formerly University Without Walls) serves students with clear educational goals who wish to design and carry out individualized B.A. or B.S. degree programs. Students tend to select the program because they value the freedom to make significant choices about what and how they learn, because they have experiences they can use as foundations for further learning, and because they want to use a variety of educational resources at the University and in the community.

Students are admitted on the basis of evidence that they have the attributes and academic skills needed to pursue a self-directed degree program, e.g., skills in writing, project design, and educational planning. A degree program can incorporate a variety of learning resources, including University classes, Independent Study courses, and self-designed projects. Knowledge gained from independent learning prior to admission may be applied if it can be demonstrated and evaluated as college-level learning.

Individualized Learning students design their degree programs around a set of standards, called graduation criteria. The criteria combine learning in a major area of study with learning in the liberal arts. Students pursue programs in a wide variety of fields, often studying in many disciplines and creating new and innovative areas of study. Examples of recent degree programs include: Wilderness and Wildlife Conservation, Visual Theatre, American Social Movements, Paleoanthropology, and Investment Analysis: Emphasis on Asia.

For more information about the Program for Individualized Learning, students should read the University College bulletin and arrange to attend an information session.

Degree Programs

Residents of west central Minnesota can learn more about the program by contacting the Learning Center at the University of Minnesota-Morris, 231 Community Services Building, Morris, Minnesota 56267. All others should contact the Minneapolis office.

For further information, contact:

Inter-College Program
7 Wulling Hall
86 Pleasant St. SE
University of Minnesota
Minneapolis, MN 55455
(612) 624-2004

Program for Individualized Learning
201 Wesbrook Hall
77 Pleasant St. SE
University of Minnesota
Minneapolis, MN 55455
(612) 624-4020

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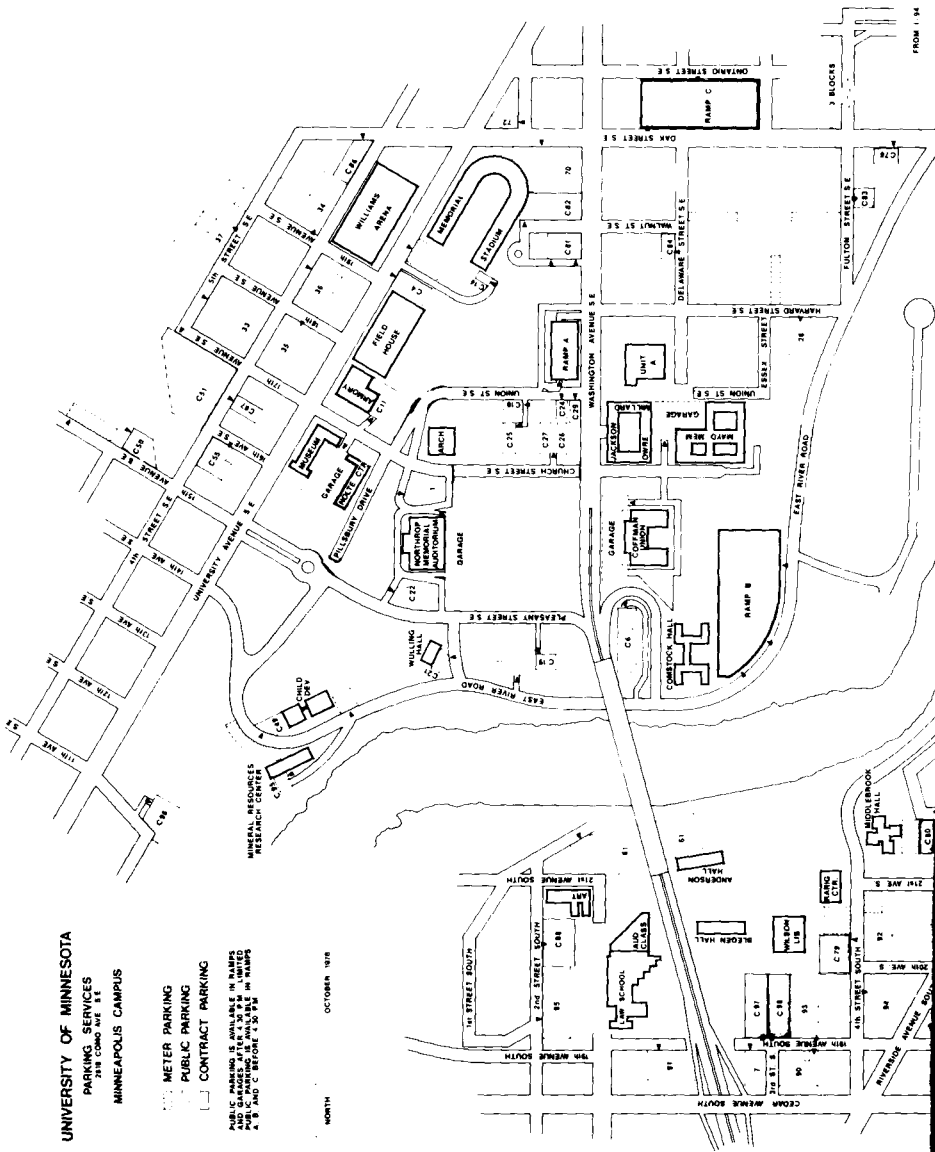
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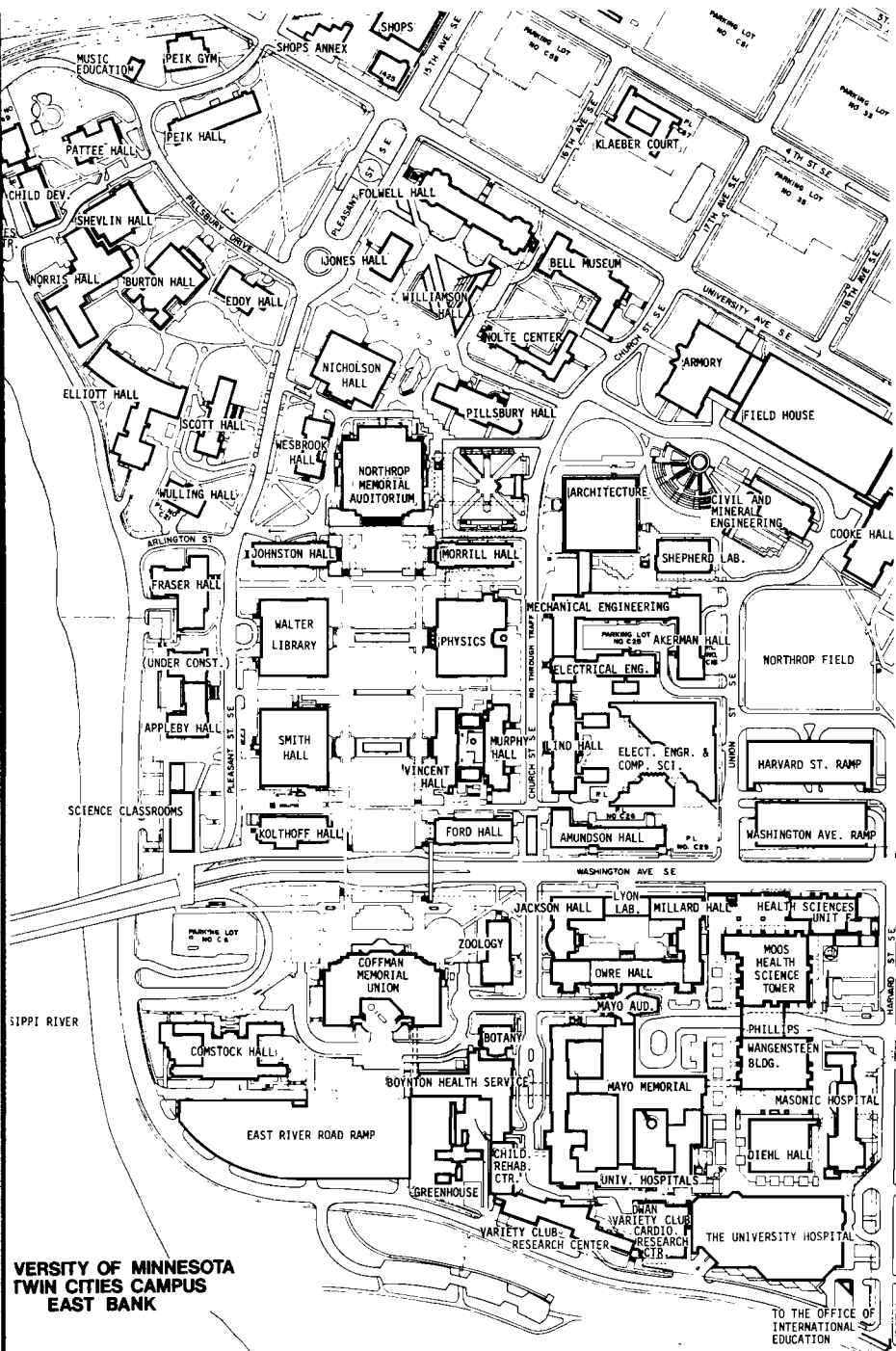
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