

UNIVERSITY OF MINNESOTA

SUMMER



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EVENING

extension classes

1993

EXTENDING
EDUCATION
AND
TELEVISION

1993 Summer Evening Extension Classes

First 5-week termJune 15 to July 20
10-week termJune 15 to August 25
Second 5-week termJuly 22 to August 25

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 termMay 3 to June 2
First 5-week termMay 3 to June 2
Second 5-week termMay 3 to July 7

II. In-Person Registration (See Office Hours, page 8)

Ten-week termMay 24 to June 2
First 5-week termMay 24 to June 2
Second 5-week termMay 24 to July 7

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UNIVERSITY OF MINNESOTA
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Extension Classes Bulletin

For complete information about Extension Classes, consult the current 1992-93 Extension Classes Bulletin. For a copy, telephone 624-2388. The 1993-94 Bulletin will be available August 1, 1993.

Equal Opportunity

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

In adhering to this policy, the University abides by the Minnesota Human Rights Act, Minnesota Statute Ch. 363; by the Federal Civil Rights Act, 420 S.C. 2000e; by the requirements of Title IX of the Education Amendments of 1972; by Sections 503 and 504 of the Rehabilitation Act of 1973; by Executive Order 11246, as amended; by 38 U.S.C. 2012, the Vietnam Era Veterans Readjustment Assistance Act of 1972, as amended; and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be addressed to Patricia A. Mullen, Director, Office of Equal Opportunity and Affirmative Action, University of Minnesota, 419 Morrill Hall, 100 Church Street S.E., Minneapolis, MN 55455, (612) 624-9547.

Registration and General Information:

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

CEE 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

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When and How to Register

Register by Mail or In Person

These are registration procedures for limited-enrollment classes and non-limited-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 sections and nonlimited-enrollment sections. Limited-enrollment sections have specified limits on the number of students who will be permitted into the section. These sections are starred. The limit is given with the course description in most cases. Early registration by mail is the best way to obtain space in limited-enrollment sections. For complete details see the instructions for **Registration by Mail**.

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 sections.

General Registration Instructions

1. Use the official registration form at the back of this bulletin, or call 624-2388 to request that registration forms be sent to you. Forms for veterans benefits certification can be requested at this telephone number also (see the index at the end of this bulletin for page numbers where these services are explained).

Regular registration offices are at 101 Wesbrook Hall on the Minneapolis campus (east bank) of the University of Minnesota and at the MacPhail Center in downtown Minneapolis at 1128 LaSalle Avenue. See maps near the end of this bulletin.

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

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 20.

Nontranscript registrations are those that apply to noncredit students (other than auditors) and certain noncredit courses; they are explained on page 89.

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. Disclosure of this information is voluntary.

Note: Failure to provide your birth date, social security number, or University I.D. number may lead to identification errors in your records.

B. Please type or use ballpoint pen when completing the form. If registration forms 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.

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. (All tuition and fees are due when you register except for students on financial aid.)

Students are urged to pay fees by personal check, money order, or credit card authorization. Change is not always available at in-person registration locations.

4. Mail registration dates: You may register for any *First five-week* or any *Ten-week* summer class **May 3 to June 2**. You may register for any *Second five-week* summer class **May 3 to July 7**.

5. In person registration dates: You may register for any *First five-week* or any *Ten-week* summer class **May 24 to June 2**. You may register for any *Second five-week* summer class **May 24 to July 7**.

6. Last day to register without a late fee: June 2 for *First five-week* and *Ten-week* classes; July 7 for *Second five-week* classes.

Enrollment is limited in sections marked with a star (★).

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.

Registration by Mail

- 1. Follow the dates and steps outlined above in General Registration Instructions. Office hours are on page 8.**
- 2. Make out a separate check to pay your tuition and fees for each limited class you register for by mail.** If one check is used to pay for two or more classes and one class is closed, the registrations cannot be processed and must be returned to you. Nonlimited-enrollment class registrations may be paid for by writing one check only. Do not send cash. You may charge tuition and fees on VISA or MasterCard, also.
- 3. If there are classes or sections of classes that are acceptable alternatives to your first choice, list those on a separate sheet of paper.** If your first choice is closed, the registration office will select the first available choice listed and process the registration.

When and How to Register

- 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

New: FAX registration. You may submit registration forms with billing authorized to your VISA or MasterCard account by FAX to the registration office. The FAX number is 625-1511.

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 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 16.

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 16, for further information and instructions.

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 dates and steps outlined above in General Registration Instructions. Office hours are on page 8.**
- 2. Bring your completed registration form to the registration 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 registration clerk. For non-limited classes, the clerk will check your registration form to make sure it is completed properly.
- 3. You must pay the full amount of tuition and fees when you register. You are not registered until your tuition and fees are paid.** Students are urged to pay tuition with a personal check, money order, or by credit card.

4. Registration Offices (see maps near the end of this bulletin):

Minneapolis Campus:

Extension Classes,
101 Wesbrook Hall

Minneapolis (downtown):

MacPhail Center,
1128 LaSalle Avenue

All registration offices are closed week-ends.

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 Classes

Students who are registering by mail for limited-enrollment classes are urged to submit a note listing alternate choices for classes. 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 permis-**

sion 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 by U.S. mail are effective the date of the postmark. FAX registrations are effective the date received.

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 CEE Counseling, University of Minnesota, 314 Nolte Center, 315 Pillsbury Drive S.E., Minneapolis, Minnesota 55455. This request must be made at two 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.

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.

When and How to Register

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 6
Ten-week term: July 27
Second 5-week term: August 12

Scholastic Committee approval is only granted under unusual circumstances. College guidelines for registration will be strongly considered for students 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** (see page 28).

Office Hours

Minneapolis Campus Office

101 Westbrook Hall
University of Minnesota
77 Pleasant Street S.E.
Minneapolis, MN 55455
(telephone 625-3333)

Through June 11 (Monday through Thursday) 8 a.m.-8 p.m.
Fridays 8 a.m.-4:30 p.m.
May 31 (Holiday) All offices closed
June 14-July 30 (Monday through Thursday) 8 a.m.-6:30 p.m.
Fridays 8 a.m.-4:30 p.m.
July 5 (Holiday) All offices closed
Aug. 2-27: Weekdays 8 a.m.-4:30 p.m.

MacPhail Center Office (Downtown Minneapolis)

1128 LaSalle Avenue
Minneapolis, MN 55403
(telephone 627-4020)

June 7-Sept. 3 (Mon. through Friday): 8 a.m.-4:30 p.m.
May 31 (Holiday) All offices closed
July 5 (Holiday) All offices closed

CEE Counseling Department

(Minneapolis Campus)
314 Nolte Center
(telephone 625-2500)

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

NOTE: 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 18). Students wishing to register for graduate credit, refer to page 22.

Day school students who wish to register in Extension classes are urged to consult first with their 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

How to Determine Which Tuition Rate To Pay

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

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

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

Note—Student status is subject to compliance review.

Tuition and fees are subject to change without notice.

Enrollment Information

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

Tuition options for each course are listed after the course title. Any course fees or special fees, required in addition to the tuition, are included in the total. The cost per credit varies depending on the level of the course, the tuition rate for the college, and resident status. In the *Course Offerings* section of this Bulletin, departments are listed alphabetically, and the college that the department is a part of is listed below the department name.

For special tuition rates for students age 62 and older, see page 28.

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

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

Students registering for graduate credit in 5xxx-level Extension classes now must pay current graduate or professional school tuition rates. See the section on Graduate Credit, page 22.

A \$15 handling fee is charged for all checks returned by a bank. Students should con-

tact the Income Management Office at 138 Wesbrook (624-6354) if they have received notification from their banks that a check has been returned to Extension Classes.

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

Nonresident and resident rates—Students who have been admitted to a degree program at the University of Minnesota and who are classified as a nonresident, nonreciprocity student will pay nonresident tuition rates. If you have never been admitted to a degree program at the University of Minnesota, you pay resident tuition rates.

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

You will receive a receipted confirmation when you register; it replaces the fee statements formerly issued. Retain this document; it is your proof of enrollment. It serves as official identification as an Extension student and must be presented in order to vote in student elections, obtain books from University libraries, or purchase student athletic and other tickets.

Registering with an authorization for payment

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

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

If registering by mail, authorizations must include the following:

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

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

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

All materials should be sent to 101 Wesbrook Hall.

Registration forms must be filled out completely.

Financial aids and loans

Academic Progress

For students not held to other college, department, or program academic standards, CEE will determine scholastic standing by evaluating satisfactory progress with the following criteria:

Completion of two-thirds (66%) of total credits for the year (first summer session 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, V, or X are not included in this calculation.

The formula for determining satisfactory progress is as follows: (Total credits grades A, B, C, or S) divided by (Total credits graded A, B, C, D, F, S, N, or I) equals 66%.

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 which may change their academic standing.

Students are encouraged to contact an academic progress adviser at 625-2500 for more information and assistance in reviewing options, study skills, and steps that might improve academic standing.

Registration with financial aid (delayed payment)

All 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 need to be in good academic standing, your record at the University must be free of major holds, and you must show eligibility for financial aid for the current academic year. In addition, all students except Minnesota State Grant and Minnesota Part-Time Student 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 delayed payment, contact the CEE Counseling Office at 314 Nolte Center (625-4334).

Enrollment Information

Students registering by mail should

1. Follow regular mail registration procedures outlined in this bulletin. To insure accurate record keeping, and as a requirement to insure accurate disbursement of financial aid, you must 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 and your request is approved, your financial aid will be applied to tuition and fees. You will be billed for or refunded any difference.

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. Take your registration forms to the financial aid desk in 101 Wesbrook Hall. Your registration forms will be checked for eligibility.
3. If you have completed all eligibility requirements, your registration will be processed.

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

When delayed payment is granted, Extension registration staff will coordinate with the Student Accounts Receivable System (STARS) so your financial aid will be credited to your account.

Receiving delayed payment does not guarantee receipt of financial aid. Stu-

dents who do not receive their expected financial 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 32. 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 are paying your own tuition and fees prior to receiving your financial aid, notify the Extension registration office in 101 Wesbrook Hall of your financial aid status when you register. They will check your record to determine admission status, academic progress, and University holds, and they will coordinate with the Student Accounts Receivable System (STARS) so your financial aid can be credited to your account.

If your financial aid award exceeds the charges to your STARS account and you choose to pick up your check for the remaining balance at the Check Disbursement Office, you must show a picture ID—either a University of Minnesota ID or a driver's license.

Students who drop below or exceed 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 15 to

August 25. Funds must be applied to classes which begin before July 1, 1993.

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. Awards are contingent upon state funding and will be made until all funds for each term have been committed. Information is available at CEE Counseling, 314 Nolte Center (625-4334).

Eligibility for the first five-week term, ten-week term, and special term classes which begin prior to July 1 is based on 1991 income.

Pell Grant—You will be considered if you are an undergraduate admitted to a University of Minnesota degree or certificate program who did not attend one or more quarters of the 1992-93 school year or took fewer than 12 credits in one or more quarters in 1992-93. You must register for at least six credits during the summer to qualify for a Pell Grant. If you have not previously submitted an American College Testing Family Financial Statement (ACT FFS) for 1992-93, you must submit one to ACT by May 1, 1993. In addition, you must submit a Summer Financial Aid Application, which will be available in 210 Fraser Hall beginning March 25. Checks are disbursed in the summer. You must turn in your Pell Grant Student Aid Report (SAR) by your last day of enrollment, or June 30, 1993, whichever is earlier. For additional information, contact the Office of Student Financial Aid, 210 Fraser Hall (625-1665), or CEE Counseling, 314 Nolte Center (625-4334).

Minnesota State Grant—You may be eligible if you are an undergraduate who did

not attend one or more quarters of the 1992-93 school year or took less than 12 credits in one or more quarters in 1991-92. You must register for at least six credits during the summer to be eligible for a Minnesota State Grant. If you have not previously submitted an American College Testing Family Financial Statement (ACT FFS) for 1992-93, you must submit one to ACT by May 1, 1993. In addition, you must submit a Summer Financial Aid Application, which will be available in 210 Fraser Hall beginning March 24. Students will be notified when checks are available. For additional information, contact the Office of Student Financial Aid, 210 Fraser Hall (625-1665), or CEE Counseling, 314 Nolte Center (625-4334).

Summer Employment Opportunities—You are eligible for summer employment if you were registered for at least six undergraduate or three graduate credits in a University of Minnesota degree or certificate program during spring quarter and are returning to school in the fall or are registered for a minimum number of credits during the summer. For more information, contact the Student Employment Center, 120 Fraser Hall (624-5554).

Summer Loan Programs—To be considered for summer 1993 loans, you must submit a 1992-93 ACT Family Financial Statement (ACT FFS) to ACT by May 1, 1993, if you have not already done so. In addition, your financial aid file must be complete by July 11, 1993. If you already received one Stafford Student Loan for 1992-93, you may be eligible for a second summer Stafford Loan. Supplemental Loan for Students (PLUS), Student Educational Loan Fund (SELF), Health Education Assistance Loan (HEAL), Law Access Loan, and Law Student Loan programs are also available for summer 1993. All loans require at least half-time registration and admission to a

Enrollment Information

University of Minnesota degree or certificate-granting program. Complete information on specific eligibility and other terms of these private lender loans is available in the Student Loans Brochure included with your ACT FFS packet. Forms for these loans are available at 210 Fraser Hall and 197 Coffey Hall. For additional information, contact 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 (DRS). For information, contact Disabilities Services, DRS Liaison, 16 Johnston Hall, 624-4037 (voice or TDD).

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, 2200 University Ave. W., #240, St. Paul, MN 55114-1840 (642-0500). Tape and braille materials also are available from the Communication Center of State Services for the Blind.

Special funds—Students with disability-related needs may contact Disabilities Services 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.

Eligible employees are those working at least 75-percent time in an ongoing or temporary appointment; working 100-percent during the period for which they apply for a scholarship if on a 9-month or 12-month appointment; employees on the lay-off list and those on maternity or other leaves without pay. Employees on student or academic appointments and family members of University employees are not eligible for Regents' Scholarships.

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 Human Resources, Information Services, Suite B-21, 1313 Fifth Street S.E., Minneapolis, MN 55414.

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 627-4505.

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.

No refunds will be given to students wishing to apply Regents' Scholarships toward limited-enrollment classes for which they have already registered and paid fees.

Regents' Scholarships are **not** accepted for Compleat/Practical Scholar courses, MacPhail Center courses, Management Advancement Program Seminars, 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 (plus all course fees or special fees). See the Compleat Scholar section in the **Noncredit Course Offerings** section of this bulletin. You must submit a letter from your department head verifying employment when you register. For limited-enrollment classes, you may register starting the second week of mail registration. For nonlimited classes, you may register during regular registration periods.

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.

No refunds will be given to students wishing to apply Academic Staff Tuition Benefit toward limited-enrollment classes for which they already have registered and paid fees.

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Tuition Reciprocity—Residents of neighboring states may be eligible for resident tuition rates or for reduced non-resident tuition rates. For additional information, contact CEE Counseling at 625-4334.

For additional information—Contact CEE Counseling, 314 Nolte Center (625-4334). 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 an adviser at the CEE 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 a commitment to selected reserves for six years after June 30, 1985. Check with the reserve unit for details. Graduate degrees are not approved.

Entitlement is 36 months of full-time training or the equivalent part-time. As of Oct. 1, 1991, benefits are payable for full-time (\$170 monthly); three-fourths time (\$127.50 monthly); and one-half time (\$85 monthly). For less than one-half time, the benefit is \$42.50 monthly. No allowance for dependents is made.

Reservists apply by completing form 22-1990 and Form DD 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 4. 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.

In-person registration is encouraged for those veterans registering for the first time under the G.I. Bill.

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*.

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 collect-

Enrollment Information

ing 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 Westbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis, MN 55455, or by filing 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 5 for the first 5-week term and 10-week term and before June 14 for the second 5-week term.

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

First 5-week term—May 12

Ten-week term—May 12

Second 5-week term—June 18

Except for advance pay requests, no certification can be sent to the VA earlier than the beginning of each term, regardless of when a veteran registers.

Satisfactory Academic Progress—Established standards of satisfactory progress can be found in the individual college bulletin for each degree program. Veterans who are not yet admitted to a degree program will be held to the CEE academic progress standards as described in the Academic Progress section of this bulletin. In the past, VA regulations have changed

often and without advance notice. The information in this section was correct when this Bulletin went to press, but is subject to change without notice.

The VA has established these guidelines:

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. Any withdrawals will be reported to the VA, which will result in an adjustment of benefit, and possibly an overpayment.
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 624-0342

Program Counseling 625-2500
(*necessary course work—
degree planning*)

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 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, 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 **Re-funds 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

For students not held to other college, department, or program academic standards, CEE will determine scholastic standing by evaluating satisfactory progress with the following criteria:

Completion of two-thirds (66 percent) of total credits for the year (first summer session 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,V, or X are not included in this calculation.

The formula for determining satisfactory progress is as follows: (Total credits grades A,B,C, or S) divided by (Total credits graded A,B,C,D,F,S,N, or I) equals 66%.

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 which may change their academic standing. Students are encouraged to contact an academic progress adviser at 625-2500 for more information and assistance in reviewing options, study skills, and steps that might improve academic standing.

Enrollment Information

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 at the discretion of the instructor when there is a reasonable expectation that the student can complete successfully the work of the course. *Do not re-register for this course in a subsequent quarter* (both registrations and grades would then be listed on your transcript). 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 19. Check with an adviser (625-2500) if you have questions about an I grade.

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

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

The symbol W indicates official cancellation without grade. It is assigned in all cases of official cancellation 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 27).

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 CEE 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 signed by the University Registrar.) Regular service is available for \$3 a copy. 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 \$9 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 current 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 or fax 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, 150 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 \$3 or \$9 a transcript.

You may pick up an unofficial copy of your record by presenting your picture I.D. at the transcript window in 150 Williamson Hall. There is no charge for an unofficial copy; 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 stamped postcards with their instructors, who will mail grades to them immediately following the end of the term.

Enrollment Information

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 are eligible for a University I.D. card and are encouraged to obtain one. Students not admitted to a college may purchase an I.D. card for \$5. To purchase a card, obtain an authorization for \$5 from the Bursar's Office and bring it to the Office of the Registrar where your student status will be verified.

Always include the I.D. number when you register or complete other University forms. Students registering for the first time or those who have not registered since 1988 should allow four weeks to process their records before requesting a card. A paid fee statement and picture I.D. also can be used to request student services instead of the I.D. card.

The Office of the Registrar in 150 Williamson Hall is open 9 a.m. to 5:30 p.m. on Monday, and 8 a.m. to 4 p.m. on Tuesday through Friday, and has some extended hours at the beginning of each term. Call 625-9357 for details. For more information, contact the CEE 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 in 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 University residence credits; however, until students have been formally admitted to the college from which they expect to obtain a degree, these credits are not considered to meet the college 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 cannot be used toward a degree. See page 683 in the 1992-93 *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. Students taking University of Minnesota credits for use at another school are advised to get written approval from their degree-granting institution in advance to ensure transferability.

Graduate School credit

Students who intend to pursue graduate-level course work through Continuing Education and Extension should be famil-

iar with the instructions in both this bulletin and the Graduate School bulletin. A Graduate School bulletin may be requested from the Graduate School, 309 Johnston Hall, 101 Pleasant Street S.E., University of Minnesota, Minneapolis, MN 55455 (625-3014).

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

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

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

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

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

Enrollment Information

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 and must pay graduate or professional master's tuition rates (for courses in Agriculture, Education, or Public Health). 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 and graduate or professional master's tuition was paid, the course is entered onto the student's undergraduate transcript with an asterisk (*) printed next to the course listing.

A student who wishes such work to be transferred to the Graduate School transcript must submit a copy of the undergraduate transcript to the Graduate School when filing the degree program form. This transcript must show that the work was taken for 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 change after the last day of instruction. Contact a CEE Scholastic Committee representative at 625-2500 with questions.

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

Policy Change Effective Fall Quarter 1992—Students who register for 8000-level course work in CEE who want graduate credit must pay graduate tuition rates. Students who register for 5000-level course work in CEE who want graduate credit must pay either graduate or professional master's tuition rates (for courses in Agriculture, Education, or Public Health). Courses for which graduate credit is available usually include the graduate-level tuition cost after the course title.

If a course taken before fall quarter 1992 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. Check with the Extension Classes Registration Office, 101 Westbrook Hall (625-3333), if you have questions.

Also, students who take courses at the professional master's rate and later choose to transfer those credits to a Graduate School degree program must pay the difference between the professional master's tuition and graduate tuition rate in effect at the time of transfer.

Use of CEE Graduate-Level Course Work—Registration for graduate credit and payment of Graduate School tuition rates does not guarantee that a course will be accepted for transfer to a Graduate School degree program. The use of CEE graduate-level course work to satisfy degree requirements at an institution other than the University of Minnesota will be entirely the prerogative of the student and the institution to which he or she submits the transcript, and is not the responsibility of either CEE 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 CEE 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 CEE 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

Enrollment Information

form and for further assistance in making an "X" registration, consult the CEE 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 CEE 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 CEE 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 CEE 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 with college approval. 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* listing 350 courses and general information is available from the Department of Independent Study, University of Minnesota, 45 Wesbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455; (612) 624-0000 or 800-234-6564; FAX (612) 626-7900.

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.

Instructors may choose whether or not to evaluate an auditor's work in a course. If you want your work evaluated in a course you are auditing, check with the instructor **before** registering to see whether he or she will evaluate the work required for the class.

Requests for change from credit registration to audit registration are made in per-

son 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 request. 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.

High School Students

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

Enrollment Information

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 CEE 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 (noncredit registration) on a space-available basis. Only tuition is reduced or waived; course fees and special fees, if any, must be paid.

Credit course registration—Credit courses may be taken for University credit for only \$6 a degree, certificate, or entrance credit hour plus any fees. Or these courses may be taken free for no credit (no transcript record is kept). For classes with limited enrollment, 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-percent 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 119.

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. (Last day is June 21 for the first 5-week term and June 28 for the 10-week term; July 28 for the second 5-week term.)

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 14-17:	8 a.m. to 6 p.m.
June 18:	8 a.m. to 4:30 p.m.
July 22, 26, 27, 28:	8 a.m. to 6 p.m.
July 23:	8 a.m. to 4:30 p.m.

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

All bookstores are closed June 29 and 30 for inventory.

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

When you register, you will receive a confirmation/fee statement. Save this document, it is proof of enrollment.

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

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 25.) A student who cannot attend a class session should arrange with the instructor—in advance, if possible—to make up the work.

How To Cancel/Add Classes

Students who wish to cancel/add classes or class sections (if space is available), after being officially registered, can do so either in person at 101 Wesbrook Hall, by FAX, or by mail.

Students who wish to cancel/add after an initial registration will be subject to the following fees and conditions: Prior to and during the first week of classes—none; during the second week of classes—\$10, if accepted; during or after the third week of classes—\$20, if accepted.

Rules, Regulations, Policies

Students may not cancel/add from the first 5-week session or the 10-week session to the second 5-week session after June 21.

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

Cancel/add during the second week or after—After the second class meeting, no cancel/add will be accepted without *written* permission of the instructor of the course the student wants to add.

Any cancel/add after the midpoint of the term requires scholastic approval.

There will be no late fee if: (1) University requests the cancel/add be made; (2) the cancel/add is required because of an unacceptable grade in a prerequisite course (see Grades, page 20); (3) cancel/add 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) cancel/add is between sections of a course with the same course number.

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 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 Westbrook 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 CEE 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 your permission. Exceptions under the law include state and federal educational and financial aid institutions. 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. You may prevent release of public information outside the University only during your terms of enrollment. To do so, you must notify the records office on your campus.

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

You are notified annually of your right to review your educational records. The regents' policy, including a directory of student records, is available for review 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, by FAX, or by writing to the Department of Extension Classes, University of Minnesota, 101 Westbrook Hall, 77 Pleas-

ant Street S.E., Minneapolis, MN 55455. Cancellations are not accepted by telephone. After cancelling officially, students will, if eligible, receive a refund (see **Refunds**, page 32), 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 6
- 10-week term: July 27
- Second 5-week term: August 12

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 Westbrook 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 Westbrook 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 of a check to cancel your registration. You must cancel officially by mail or in person. A check handling fee of \$15 is charged for any stop order payment and you are responsible for any tuition due up to the point you officially cancel (based on refund schedule below). A hold will be placed on your records until these fees are paid. Contact the cashier's office in 138 Westbrook Hall (624-6354) before you stop payment of a check for any reason.

Veterans—Any veteran registered under the G.I. Bill must notify the Extension Veterans Office, 101 Westbrook 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.

Rules, Regulations, Policies

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 any late fees) under the conditions outlined in item 2 below; or (3) a refund of part of the tuition and any course fees and special fees after the class has begun, provided that the student cancels and requests a refund within the time limits outlined in the refund percentage schedules given below in items 3, 4, and 5.

(Students on financial aid should check with an adviser before requesting refunds.)

Students who wish to cancel a class and add another class should read the section on how to cancel/add classes, page 30.

1. Full refund of all tuition and course-related 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 course-related fees 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. Refunds of tuition and course-related fees for classes that meet the **first 5-week term** will be made according to the following cancellation schedule:

<u>Amount of refund</u>	<u>Cancellation Deadline</u>
100 percent	June 22
50 percent	June 29

No refunds after June 29 for first 5-week term classes.

4. Refunds of tuition and course-related fees for classes that meet the **10-week term** will be made according to the following cancellation schedule:

<u>Amount of refund</u>	<u>Cancellation Deadline</u>
100 percent	June 22
75 percent	June 29
50 percent	July 6

No refunds after July 6 for 10-week term classes.

5. Refunds of tuition and course-related fees for classes that meet the **second 5-week term** will be made according to the following cancellation schedule:

<u>Amount of refund</u>	<u>Cancellation Deadline</u>
100 percent	July 29
50 percent	August 5

No refunds after August 5 for second 5-week term classes.

6. Refunds for special term courses are prorated in relation to the length of the term.

7. Late fees are not refundable in any case.

Cancellations by mail are effective the date of postmark.

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

Course Descriptions

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 22.

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 sections on page 4.
†	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).
⊙	A joint Day/Extension class
Δ	Consent of unit offering course is required.
cr	Credit
CEU	Continuing Education Unit (10 contact hours of noncredit learning); see page 25.
Qtr	Quarter
Sem	Semester
Spec	Special Term
S/N	Satisfactory/No credit grading system. See page 20.
A/F	Letter grading system. See page 20.
Prereq	Prerequisite. See page 18.
Lect	Lecture
Rec	Recitation
Sec	Section

Credit Course Offerings

(Noncredit courses are listed beginning on page 89. See Buildings and Maps, pages 125-129. Course Numbering, page 34)

Accounting (Acct)

(645 Management/Economics: 624-6506)
Carlson School of Management

Textbooks for most Acct courses are available at the Harold D. Smith Bookstore on the West Bank campus (625-3000).

Summer Accounting courses are offered for seven weeks, June 16-Aug. 4, although for registration purposes the 10-week term designator is used below and on the registration form. Acct 5160 is the exception and is offered for a full 10 weeks. This format applies to both day and evening classes.

Acct 1024/1025 have been replaced by Acct 1050. All students must take Acct courses A-F.

Acct 1050 INTRODUCTION TO FINANCIAL REPORTING. 5 credits tuition* (includes \$16 special fee): Resident \$358.50; Non-resident \$1009.25. (IS)

Introduction to basic concepts of measurement and valuation which underlie the development of financial reports for external users. Financial statement preparation, analysis of alternative valuation approaches, and interpretation of financial statement information are the focal points of the course. (Prereq 40 cr completed. Limited to 45)

Ten wk, ★Sec 50, MW, 6-9, BlegH 215

Ten wk, ★Sec 51, TTh, 6-9, BlegH 215

Acct 3001 INTRODUCTION TO MANAGEMENT ACCOUNTING. 4 credits, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20. (IS)

A broad overview of management accounting as the main information collection and analysis technology in an organization. Topics include analysis of cost-volume-profit relationships, budgeting, and analysis of variances from budgeted performance, and issues relating to decentralized organizational design. (Prereq 1025 or 1050 and at least 90 credits completed or in progress. Limited to 45)

Ten wk, ★Sec 50, TTh, 6-8:30, BlegH 150

Acct 3101 INTERMEDIATE FINANCIAL REPORTING. 4 credits, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20.

Relationships between economic events and their representation in financial statements aimed at external users. Income determination, asset valuation, and capitalization of corporations are covered. (Prereq 1050 and at least 90 credits completed or in progress. Limited to 45)

Ten wk, ★Sec 50, MW, 6-8:30, BlegH 255

Acct 5102 ADVANCED REPORTING I. 4 credits, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20; Resident Graduate credit \$656; Non-resident Graduate credit \$1296.

Development of an understanding of the relationship between complex events such as defined benefit pension plans, leases, and intercorporate investments and the reflection of these events in financial statements. Includes an introduction to business combinations and consolidated financial reporting. (Prereq 3101, 5101. At least 90 credits completed or in progress. Qualified students may register for graduate credit at the University of Minnesota. Limited to 60)

Ten wk, ★Sec 50, MW, 6-8:30, BlegH 140

Acct 5125 AUDITING PRINCIPLES AND PROCEDURES. 4 credits, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20; Resident Graduate credit \$656; Non-resident Graduate credit \$1296.

The auditor's role and function. Includes audit standards, ethics, procedures, and legal responsibilities. (Prereq 5101 or 3101, and at least 90 cr completed or in progress. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30 Extension students)

Ten wk, ★Sec 50, TTh, 5:30-8, BlegH 220

Acct 5135 INCOME TAX ACCOUNTING. 4 credits, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20; Resident Graduate credit \$656; Non-resident Graduate credit \$1296. (IS)

An introduction to principles of Federal income taxation of various taxpaying entities. (Prereq 1050 or 1025 and at least 90 cr completed or in progress. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30 Extension students)

Ten wk, ★Sec 50, MW, 5:30-8, BlegH 130

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

Acct 5160 FINANCIAL STATEMENT ANALYSIS. 4 credits, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20; Resident Graduate credit \$656; Non-resident Graduate credit \$1296.

Interpretation and analysis of financial statements and schedules for investors and other users. (Prereq 1050 or MBA 8030 and at least 90 cr completed or in progress. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20 Extension students)

Ten wk, ★Sec 50, Th, 5:30-9, BlegH 415

Acct 5180 ADVANCED FINANCIAL REPORTING II. 4 credits, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20; Resident Graduate credit \$656; Non-resident Graduate credit \$1296.

Consolidated financial reporting with a particular focus on international business organizations. An introduction to reporting issues in governmental and not-for-profit entities is also presented. (Prereq 3102 or 5102. At least 90 credits completed or in progress. Qualified students may register for graduate credit at the University of Minnesota. Limited to 30 Extension students)

Ten wk, ★Sec 50, MW, 5:30-8, BlegH 220

Afro-American and African Studies (Afro)

(808 Social Science Tower: 624-9847)

College of Liberal Arts

Textbooks for most Afro and Arab courses are available at the Harold D. Smith Bookstore on the West Bank campus (625-3000).

Gayle Foreman, Lecturer

Charles A. Pike, Assistant Professor

Afro 3601 INTRODUCTION TO AFRICAN LITERATURE. 4 credits, tuition*: Resident \$284; Non-resident \$823.60. (IS)

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

First 5 wk, ★Sec 50, TTh, 6:15-8:50, BlegH 210, Pike

Afro 3910 THE AFRICAN-AMERICAN CHILD: A COMPREHENSIVE APPROACH. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Designed for those who are involved in or plan to be involved in the important task of helping African-American children develop emotionally healthy and psychologically secure in a culturally diverse society. The course will focus on the specific research conducted by African-American psychologists and child development specialists through lectures, films, guest speakers, and readings. (No prereq. Limited to 35)

Second 5 wk, ★Sec 50, TTh, 6-8:30, BlegH 240, Foreman

Arabic (Arab)

Arab 3011 ISLAM IN AFRICA. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Ideological, doctrinal, and ritual aspects of Islam in continental Africa. Various religious brotherhoods and Sufi orders from different African countries in the 20th century: the Ansar, the Khatmiyya, the Muslim Brothers, the Qadriyya, the Republican Brothers, the Sanusiyya, the Tijaniyya, and others. No knowledge of Arabic required. All readings in English. (No prereq. Limited to 30)

Second 5 wk, ★Sec 50, MW, 4:15-7, BlegH 210, AshShareef

American Indian Studies (AmIn)

(102 Scott Hall: 624-1338)

College of Liberal Arts

(See also REX 0243, Native American Myth Busting in American History)

No courses offered summer 1993

American Studies (AmSt)

(104 Scott Hall: 624-4190)

College of Liberal Arts

Textbooks for most AmSt courses are available at the Minnesota Book Center in Williamson Hall (625-6000).

William H. Agee, Lecturer

John Fiske, Visiting Professor

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

AmSt 1001 AMERICAN CULTURE. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

Interdisciplinary study of selected class, gender, public policy, and social issues by comparing the cultures and artistic expression of at least three of the following groups: European American, African American, American Indian, Chicano/Latino, and Asian American. To mid-19th century. (No prereq) First 5 wk, Sec 50, MW, 6-8:30, BlegH 135

AmSt 1003 AMERICAN CULTURE. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

Interdisciplinary study of selected class, gender, public policy, and social issues by comparing the cultures and artistic expression of at least three of the following groups: European American, African American, American Indian, Chicano/Latino, and Asian American. 1920s to the present. (No prereq) Second 5 wk, Sec 50, TTh, 6-8:30, BlegH 135

AmSt 3111 CREATIVE AMERICANS AND THEIR WORLDS. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

A study of the ways in which the works of selected American writers, painters, architects, filmmakers, and other artists can illuminate tensions and conflicts which have arisen out of a dual commitment by Americans to values located in nature and the natural landscape, on the one hand, and, on the other, to values associated with technological progress and ever-higher levels of affluence. "The myth of the garden" in literature and painting. Significance of paintings of urban-technological landscapes. The development of the skyscraper and of the "Chicago School" of modern architecture. The work and ideas of Frank Lloyd Wright. Contemporary issues relating to technology and the environment considered from the perspectives provided by the artists and writers we have studied. Readings of varying lengths from Crevecoeur, Emerson, Thoreau, Mark Twain, Frank Norris, and Tom Wolfe. (No prereq. Limited to 40) First 5 wk, ★Sec 50, TTh, 6-8:30, BlegH 235, Agee

AmSt 3113 AMERICAN CULTURAL DIVERSITY. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

The cultural expression, values, and lifestyles of America's many peoples, including minority and majority cultures. *Meets CLA Cultural Pluralism requirement.* (No prereq. Limited to 60) Second 5 wk, ★Sec 50, TTh, 6-8:30, BlegH 235

Ancient Studies (AnSt)

(2051/2 Folwell Hall: 625-2503)

College of Liberal Arts

(See also REX 0209, Kelheim: Origins of an Iron Age City)

No courses offered summer 1993.

Anthropology (Anth)

(215 Ford Hall: 625-3400)

College of Liberal Arts

Textbooks for most Anth courses are available at the Minnesota Book Center in Williamson Hall (625-6000).

Bettina Arnold, Lecturer
Kathleen Barlow, Lecturer
Guy E. Gibbon, Professor
Debra Walker, Lecturer

Anth 1101 HUMAN ORIGINS. 5 credits, §1001, tuition*: Resident \$342.50; Non-resident \$993.25. (IS)

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

First 5 wk, Sec 50, TTh, 6-9:20, FordH 130, Gibbon

Anth 1102 INTRODUCTION TO SOCIAL AND CULTURAL ANTHROPOLOGY. 5 credits, §1002, tuition*: Resident \$342.50; Non-resident \$993.25. (IS)

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

First 5 wk, Sec 50, MW, 6-9:20, FordH 155, Barlow

Anth 3003 THE RISE OF CIVILIZATION. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

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

Second 5 wk, Sec 50, TTh, 6-8:50, FordH 155, Arnold

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

The Archaeological Field School at Cerros, Belize.

Five-week session (July 5-Aug. 6, 1993) will introduce students to archaeological fieldwork at an ancient Maya city situated on Chetumal Bay in northern Belize. Students will stay at a small lodge approximately two miles from the site. Transportation and living expenses are additional. Contact the Department of Anthropology for complete information: (612) 625-3400.

For graduate credit, register for Anth 5920 (5-8 credits). All others register for Anth 3376 (5-8 credits).

Anth 3376 FIELD RESEARCH IN ARCHAEOLOGY. 5-8 credits, tuition* each credit: Resident \$71; Non-resident \$205.90.

Excavation strategies, survey, recording procedures and laboratory analysis at Maya site of Cerros. (Prereq #. Meets concurrently with 5920. Limited to a combined total of 15)

Anth 5920 TOPICS: ADVANCED FIELD RESEARCH IN ANTHROPOLOGY. 5-8 credits, tuition each credit*: Resident Graduate credit \$160; Non-resident Graduate credit \$320.

Advanced excavation strategies, survey, recording procedures and laboratory analysis at Maya site of Cerros. (Prereq #. Meets concurrently with 3376. Qualified students may register for graduate credit at the University of Minnesota. Limited to a combined total of 15)

Arabic

(See Afro-American and African Studies)

Architecture (Arch)

(110 Architecture: 624-7866)

College of Architecture and Landscape Architecture

(See also CSh 0127, River Ramble: Discovering River Town Architecture)

Textbooks for most Arch courses are available at the Minnesota Book Center in Williamson Hall (625-6000).

Peter Carlsen, Lecturer
Arnold Lucke, Lecturer
Andrzej Piotrowski, Assistant Professor
Stephen Weeks, Associate Professor

Noncredit Workshops

Arch 0013 EXPLORING ARCHITECTURE: A CAREER DISCOVERY WORKSHOP. No credit, tuition*: \$182.25.

Intended for those who are interested in exploring architecture as a possible career path. The course is organized as a seminar workshop, meeting evenings, 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 50, MTWThF, 6:30-9, July 20-24, July 27-31, Arch 40, Carlsen. *No late fee through July 13.*

Arch 0014 CONSTRUCTION PROCESS: A JOB SITE VISITATION SEMINAR. No credit, tuition*: \$121.50.

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 50, W, 8 a.m.-12, July 7-14, Arch 5; July 21-Sept. 8, , Arch 25, Lucke. *No late fee through July 1.*

Credit Courses

Arch 1301 INTRODUCTION TO ARCHITECTURAL DRAWING. 4 credits, \$1002, tuition*: Resident \$274; Non-resident \$794.60.

Emphasizes visualization and drawing of form and space in the physical environment. Explores basic elements of form using design drawing systems and conventions. Develops skills in visual literacy and expression through drawing. (No prereq. Limited to 15)

First 5 wk, ★Sec 50, TTh, 5-8:30, Arch 30, Piotrowski

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Arch 5970 DIRECTED STUDY. Credits arranged. Each credit: Resident \$77; Non-resident \$223.30; Resident Graduate credit \$160; Non-resident Graduate credit \$320.

Independent study in Architecture. Subject matter arranged. Areas of study useful to individual program objectives not available in regular course offerings. For complete information, contact Prof. Stephen Weeks, 110 Architecture, University of Minnesota, Minneapolis, MN 55455. Telephone 624-2832. (Prereq written #. Qualified students may register for graduate credit at the University of Minnesota)

Area Studies Programs

(232A Social Sciences: 624-8543)

College of Liberal Arts

Textbooks for most courses offered through Area Studies Programs on the East Bank campus are available at the Minnesota Book Center in Williamson Hall (625-6000); courses offered on the West Bank campus are at the Harold D. Smith Bookstore (625-3000); and those offered on the St. Paul campus are at Books Underground (624-9200).

Byron Marshall, Professor

East Asian Studies (EAS)

EAS 1463 INTRODUCTION TO EAST ASIA IN MODERN TIMES. 4 credits, §Hist 1463, 3463, tuition*: Resident \$274; Non-resident \$794.60.

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

First 5 wk, Sec 50, MW, 6-8:30, BlegH 155

EAS 3471 20TH-CENTURY JAPAN. 4 credits, §Hist 3471, tuition*: Resident \$284; Non-resident \$823.60.

The development of an industrial society, parliamentary government, mass culture, and imperialism from the Meiji reforms to the late 19th century through World War II to the contemporary period. (No prereq. Meets concurrently with Hist 3471)

Second 5 wk, Sec 50, TTh, 6-8:30, BlegH 250, Marshall

Latin American Studies (LAS)

LAS 3401 SURVEY OF LATIN AMERICAN HISTORY: COLONIAL PERIOD TO 1800. 4 credits, §Hist 1401, 3401, tuition*: Resident \$284; Non-resident \$823.60.

The Pre-Hispanic and colonial period to 1800 with emphasis on social, cultural, and economic aspects. (No prereq. Meets concurrently with Hist 1401, 3401)

First 5 wk, Sec 50, TTh, 6-8:30, BlegH 135

Art Education (ArEd)

(125 Peik Hall: 625-6372)

College of Education

(Department of Curriculum and Instruction)

Textbooks for most ArEd courses are available at the Minnesota Book Center in Williamson Hall (625-6000).

ArEd 3600 STUDENT TEACHING AND SUPERVISION OF ART. 3 credits, tuition*: Resident \$231; Non-resident \$669.90.

Observations, participation, supervisory experiences with various types and levels of art classes. **Must be taken S-N.** (Prereq 3120, 3130, sr in art education, SeEd 3150, Elem 3101, §3610) Spec Term, Sec 50, MTWThF, 9 a.m.-4, Aug. 30-Sept. 22, Selected Metro Public Schools

Art History (Arth)

(107 Jones Hall: 624-4500)

College of Liberal Arts

(See also CSch 0108, Georgia O'Keeffe and Alfred Stieglitz: Two Lives Shared and Compared; REX 0802, Artistic Discovery About 17th-Century Naples)

Textbooks for most Arth courses are available at the Harold D. Smith Bookstore on the West Bank campus (625-3000).

Sheila McNally, Professor of Classical Studies and Art History

Arth 3008 HISTORY OF ANCIENT ART. 4 credits, §Clas 3008, tuition* (includes \$5 course fee): Resident \$289; Non-resident \$828.60.

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

First 5 wk, Sec 50, MW, 6:30-9, FolH 306, McNally

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

Arth3035 MYTHOLOGY IN WESTERN ART.

4 credits, §Clas 3035, tuition* (includes \$5 course fee): Resident \$289; Non-resident \$828.60.

Selected figures and events from Classical mythology as ancient artists first depicted them, and as they reappeared in later Western art. (No prereq. Meets concurrently with Clas 3035)

First 5 wk, Sec 50, TTh, 6:30-9:00, FolH 306, McNally

Arts, Studio (ArtS)

(208 Art Building: 625-8096)

College of Liberal Arts

Textbooks for most ArtS courses are available at the Harold D. Smith Bookstore on the West Bank campus (625-3000).

(See also CSch 0184, Learning to Weave)

Guy Baldwin, Associate Professor

Karl Bethke, Professor

Kim Downing, Lecturer

Curtis Hoard, Professor

Tom Lane, Associate Professor

Alison Morse, Lecturer

Malcom Myers, Professor Emeritus

Michael Rivard, Lecturer

For information about the Split Rock Arts Program, see page 42.

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. Use of a locker for the quarter is included in the course fee for sculpture and ceramics classes. 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.

ArtS 1101 BASIC DRAWING.

4 credits, tuition* (includes \$10 special fee and \$10 course fee): Resident \$294; Non-resident \$814.60.

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 50, MW, 6-9:45, ArtB 141

Second 5 wk, ★Sec 51, TTh, 6-9:45, ArtB 140

Ten wk, ★Sec 52, T, 6-9:45, ArtB 150

ArtS 1102 DRAWING.

4 credits, tuition* (includes \$5 special fee and \$10 course fee): Resident \$289; Non-resident \$809.60.

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

Second 5 wk, ★Sec 50, MW, 6-9:45, ArtB 150

(See also CSch 0169, On-Site Drawing)

ArtS 1301 BASIC SCULPTURE.

4 credits, tuition* (includes \$10 special fee and \$55 course fee): Resident \$339; Non-resident \$859.60.

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

First 5 wk, ★Sec 50, TTh, 6-9:45, ArtB 65, Baldwin

ArtS 1404 COLOR.

4 credits, tuition* (includes \$10 special fee and \$10 course fee): Resident \$294; Non-resident \$814.60.

Introduction to color and pictorial organization. This will provide students with intensive investigation of color and its visual implications. (Prereq 1101. See Restrictions above. Limited to 20)

First 5 wk, ★Sec 50, TTh, 6-9:45, ArtB 160, Bethke

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

ArtS 1601 VIDEO ARTS PRODUCTION I. 4 credits, tuition* (includes \$5 special fee and \$160 course fee): Resident \$439; Non-resident \$959.60.

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 tape. (No prereq. Limited to 15)

Ten wk, ★Sec 50, W, 6-10, Intermedia Arts, 425 Ontario, Downing

ArtS 1602 ART AND COMPUTERS I. 4 credits, tuition* (includes \$5 special fee and \$160 course fee): Resident \$439; Non-resident \$959.60.

A combination lecture and studio course focusing on the creative use of the Amiga and various 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 15)

Ten wk, ★Sec 50, T, 1-5, Intermedia Arts, 425 Ontario, Morse

Ten wk, ★Sec 51, W, 6-10, Intermedia Arts, 425 Ontario, Morse

ArtS 1701 INTRODUCTION TO PHOTO MEDIUM. 4 credits, tuition* (includes \$10 special fee and \$30 course fee): Resident \$314; Non-resident \$834.60.

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 50, TTh, 6-9:45, ArtB 120

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

ArtS 1811 CERAMICS. 4 credits, tuition* (includes \$10 special fee and \$55 course fee): Resident \$339; Non-resident \$859.60.

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

First 5 wk, ★Sec 50, MW, 6-9:45, ArtB 10, Hoard

ArtS 1812 CERAMICS. 4 credits, tuition* (includes \$10 special fee and \$55 course fee): Resident \$339; Non-resident \$859.60.

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

Second 5 wk, ★Sec 50, MW, 6-9:45, ArtB 10, Lane

ArtS 3105 PAINTING. 4 credits, tuition* (includes \$10 special fee and \$5 course fee): Resident \$299; Non-resident \$838.60.

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

First 5 wk, ★Sec 50, MW, 6-9:45, ArtB 161

ArtS 3120 PAINTING. 4 credits (maximum 12 cr), tuition* (includes \$10 special fee and \$5 course fee): Resident \$299; Non-resident \$838.60.

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

Second 5 wk, ★Sec 50, MW, 6-9:45, ArtB 151

ArtS 3130 WATERCOLOR. 4 credits each term (maximum 12 cr), tuition* (includes \$10 special fee and \$5 course fee): Resident \$299; Non-resident \$838.60.

Introduction to transparent watercolor. Figure, still life, landscape, and individual directions. (Prereq 1101, 1404, 1401 or #. Meets concurrently with 5130. See Restrictions, page 40. Limited to a combined total of 25)

First 5 wk, ★Sec 50, TTh, 6-9:45, ArtB 141, Myers

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

ArtS 3601 VIDEO ARTS PRODUCTION II. 4 credits, tuition* (includes \$5 special fee and \$160 course fee): Resident \$449; Non-resident \$988.60.

Building on skills learned in ArtS 1601 students will develop conceptual skills involved in video production. Areas covered will include scripting, storyboarding, budgeting, and other preproduction concerns; advanced camera and lighting techniques, editing with emphasis on the creative process, video processing, and monitoring equipment. Students will complete a final project individually or with a group. (Prereq 1601. Limited to 15)

Ten wk, ★Sec 50, M, 6-10, Intermedia Arts, 425 Ontario, Rivard

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

Arts 5130 WATERCOLOR. 4 credits each term (maximum 16 cr), tuition* (includes \$10 special fee and \$5 course fee): Resident \$299; Non-resident \$838.60.

Advanced watercolor techniques, aesthetic directions. Continued development of concepts and individual direction. (Prereq 12 cr of 3130 or #. Meets concurrently with 3130. See Restrictions, page 40. May not be taken for graduate credit. Limited to a combined total of 25)

First 5 wk, ★Sec 50, TTh, 6-9:45, ArtB 141, Myers



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 you can choose from 49 workshops in a variety of arts areas. Paint with a master watercolor artist from China; handbuild pots for Raku firing; work with nationally renowned basketry artists; create a visual or written journal; design quilts; write a poem, short story, novel, or nonfiction work; explore artmaking's connections to the subconscious; photograph people; draw and paint; create contemporary bead art; write children's books; make fabric art; work with outstanding ethnic artists 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 11 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.

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

Biology (Biol)

(223 Snyder Hall: 624-9717)

College of Biological Sciences

(See also *Natural and Physical Sciences* in The Compleat Scholar noncredit section)

Textbooks for most Biol courses are available at the Minnesota Book Center in Williamson Hall for Minneapolis campus classes(625-6000) and at Books Underground for St. Paul campus classes (624-9200).

Richard W. Peifer, Education Specialist

Biol 1009 GENERAL BIOLOGY. 5 credits, tuition* (includes \$10 course fee): Resident \$352.50; Non-resident \$1003.25. (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 50, Lect TTh, 6-7:15, MoosT 2-650, Peifer; Lab TTh, 7:30-9:15, KoltH S177

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Business, Government, and Society (BGS)

(835 Management/Economics: 624-5232)
Carlson School of Management

Textbooks for most BGS courses are available at the Harold D. Smith Bookstore on the West Bank campus (625-3000).

BGS 3004 INTERNATIONAL BUSINESS. 4 credits, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20. (IS)

World business with emphasis on the global economy, international concepts, global business structures, comparative cultures and environments, global business strategies, multinational corporations and technology, personnel and operations in the host nations. Resource (including energy) questions in their global contexts: quantities, demands, distribution of resources. (Prereq at least 90 cr completed or in progress. May not be taken S-N. Limited to 40)

Second 5 wk, ★Sec 50, TTh, 6-8:45, BlegH 120

Business Law (BLaw)

(645 Management/Economics: 624-6506)
Carlson School of Management

Textbooks for most BLaw courses are available at the Harold D. Smith Bookstore on the West Bank campus (625-3000).

Donald G. Campbell, Lecturer

BLaw 3058 INTRODUCTION TO LAW, AND THE LAW OF CONTRACTS AND SALES CONTRACTS. 4 credits, \$8158, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20. (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 1101 or equivalent and at least jr standing for business degree students. May not be taken S-N. Limited to 50)

First 5 wk, ★Sec 50, MW, 6-8:30, BlegH 120, Campbell

Second 5 wk, ★Sec 51, MW, 6-8:30, BlegH 135, Campbell

Chicano Studies (Chic)

(102 Scott Hall: 624-6309)
College of Liberal Arts

Textbooks for most Chic courses are available at the Minnesota Book Center in Williamson Hall (625-6000).

Guillermo Rojas, Professor

Chic 3375 FOLKLORE OF GREATER MEXICO. 4 credits, tuition*: Resident \$284; Non-resident \$823,60.

Introduces students to some of the central approaches to folklore studies and to Hispanic material culture in the Southwest region of the United States and the northern provinces of Mexico. (No prereq. Meets CLA World Studies and Cultural Pluralism requirements. Limited to 40)

First 5 wk, ★Sec 50, MW, 6-8:30, ScottH 4, Rojas

Chic 3507 INTRODUCTION TO CHICANO LITERATURE. 4 credits, tuition*: Resident \$284; Non-resident \$823,60.

History, background, readings in all genres of Chicano literature. (No prereq. Meets CLA Cultural Pluralism and Group D—Literary and Artistic Expression requirements. Limited to 40)

Second 5 wk, ★Sec 50, MW, 6-8:30, ScottH 4, Rojas

Child Psychology (CPsy)

(104 Child Development: 624-2396)
College of Education

Institute of Child Development

(See also REX 0266, An Examination of Children's Stories of Emotional Experiences)

Textbooks for most CPsy courses are available at the Minnesota Book Center in Williamson Hall (625-6000).

Patricia Melendez, Research Assistant

CPsy 1301 INTRODUCTORY CHILD PSYCHOLOGY. 4 credits, \$3309, \$5301, tuition*: Resident \$274; Non-resident \$794.60. (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 50, T, 6:20-8:50, BuH 120

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

CPsy 3309 INTRODUCTORY CHILD PSYCHOLOGY FOR THE SOCIAL SCIENCES. 4 credits, \$1301, \$5301, tuition*: Resident \$308; Non-resident \$893.20.

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 50, T, 6:20-8:50, BuH 120

Classical and Near Eastern Studies

(331 Folwell Hall: 625-5353)

Classical and Near Eastern Studies
College of Liberal Arts

Textbooks for most Clas and Lat courses are available at the Minnesota Book Center in Williamson Hall (625-6000).

Jackson Hershbell, Professor
Sheila McNally, Professor

Classics (Clas)

Clas 1042 GREEK AND ROMAN MYTHOLOGY. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

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

Second 5 wk, Sec 50, MW, 6:20-8:50, FolH 104, Hershbell

Clas 3008 HISTORY OF ANCIENT ART. 4 credits, \$ArH 3008, tuition* (includes \$4 course fee): Resident \$288; Non-resident \$827.60.

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

First 5 wk, Sec 50, MW, 6:30-9, FolH 306, McNally

Clas 3035 MYTHOLOGY IN WESTERN ART. 4 credits, \$ArH 3035, tuition* (includes \$4 course fee): Resident \$288; Non-resident \$827.60.

Selected figures and events from Classical mythology as ancient artists first depicted them, and as they reappeared in later Western art. (No prereq. Meets concurrently with ArtH 3035)

First 5 wk, Sec 50, TTh, 6:30-9:00, FolH 306, McNally

Latin (Lat)

Note—Lat 1101 requires no previous knowledge of Latin.

Lat 1101-1102-1103 LATIN. 5 credits each offering, tuition each offering*: Resident \$342.50; Non-resident \$993.25. (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 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 214. (No prereq for 1101; 1101 or # for 1102; 1102 or # for 1103)

First 5 wk, 1101, Sec 50, MW, 5-7, FolH 116, 218, 234

First 5 wk, 1102, Sec 51, MW, 5-7, FolH 116, 218, 234

First 5 wk, 1103, Sec 52, MW, 5-7, FolH 116, 218, 234

Lat 1104 LATIN READINGS: CAESAR. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25. (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 214. Meets concurrently with 1101-1102-1103. (Prereq 1103 or #)

First 5 wk, Sec 50, MW, 5-7, FolH 116, 218, 234

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Composition and Communication

Communication Disorders (CDis)

(115 Shevlin Hall: 624-3322)
College of Liberal Arts

Textbooks for most CDIs courses are available at the Minnesota Book Center in Williamson Hall (625-6000).

Kathleen Feeley, Lecturer
Susan Johnston, Lecturer

CDIs 5900 TOPICS IN COMMUNICATION DISORDERS: AUGMENTATIVE COMMUNICATION TECHNOLOGY. 2 or 3 credits, tuition*: Resident \$142 or \$213; Non-resident \$411.80 or \$617.70; Resident Graduate credit \$320 or \$480; Non-resident Graduate credit \$640 or \$960.

Intended for students who are interested in designing and implementing augmentative and alternative communication systems for learners who have severe communicative disabilities. Addresses issues pertinent to the design and implementation of communication systems and provides hands-on experience with a number of portable electronic communication aids. The number of credits (either 2 or 3) is based on the number of portable electronic communication devices on which the student chooses to achieve competency. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 15)

Spec Term, ★Sec 50, MTWThF, 9 a.m.-12, June 24-July 2, ShevH 125, Feeley, Johnston

The Compleat Scholar

(See page 89)

Composition and Communication (Comp)

(306 Lind Hall: 625-2888)
College of Liberal Arts

(See also writing courses in English, Rhetoric, and The Compleat Scholar)

Textbooks for most Comp courses are available at the Minnesota Book Center in Williamson Hall (625-6000).

You must attend the first class meeting in order to keep your place in the class, unless you obtain approval from the instructor. To register in a composition course after the first day of class, consent of instructor is required.

Comp 1011 WRITING PRACTICE I. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25. (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. (No prereq. Limited to 25)

The Writing Practice requirement is fulfilled by successful completion of Comp 1011. Students whose work does not meet an acceptable standard in 1011 will receive a continuation grade ("X"), and will take Comp 1013 to complete the requirement. Comp 1013 is taught every quarter during the academic year.

Ten wk, ★Sec 50, M, 6-8:50, KoltH S134

Ten wk, ★Sec 51, T, 6-8:50, AmundH 156

Ten wk, ★Sec 52, T, 6-8:50, KoltH S134

Comp 3014 WRITING IN THE SOCIAL SCIENCES. 4 credits, tuition*: Resident \$284; Non-resident \$823.60. (IS)

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

Ten wk, ★Sec 50, M, 6-8:30, BlegH 245

Ten wk, ★Sec 51, M, 6-8:30, KoltH S133

Ten wk, ★Sec 52, W, 6-8:30, KoltH S135

Ten wk, ★Sec 53, W, 6-8:30, KoltH S133

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

Comp 3022 CRITICAL READING AND WRITING FOR MANAGEMENT. 4 credits, tuition*: Resident \$284; Non-resident \$823.60. (IS)

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

Ten wk, ★Sec 50, W, 6-8:30, BlegH 350

Comp 3027 ADVANCED EXPOSITORY WRITING. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

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

Ten wk, ★Sec 50, T, 6-8:30, KoltH S133

Ten wk, ★Sec 51, Th, 6-8:30, AmundH 124

Comp 3031 TECHNICAL WRITING FOR ENGINEERS. 4 credits, tuition*: Resident \$284; Non-resident \$823.60. (IS)

Presenting technical information accurately and clearly with attention to the rhetorical and organizational contexts of the writing. Analysis of writing situations, style and form of technical reports, and collaborative written and spoken presentations. (Prereq jr standing, the Writing Practice requirement, or equivalent. Limited to 20)

Ten wk, ★Sec 50, T, 6-8:30, AmundH 124

Ten wk, ★Sec 51, T, 6-8:30, KoltH S135

Ten wk, ★Sec 52, W, 6-8:30, KoltH S134

Ten wk, ★Sec 53, Th, 6-8:30, AmundH 120

Ten wk, ★Sec 54, Th, 6-8:30, SmithH 121

Comp 3032 PREPROFESSIONAL WRITING FOR BUSINESS. 4 credits, tuition*: Resident \$284; Non-resident \$823.60. (IS)

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

Ten wk, ★Sec 50, T, 6-8:30, BlegH 115

Ten wk, ★Sec 51, T, 6-8:30, RarigC 616

Ten wk, ★Sec 52, W, 6-8:30, RarigC 610

Comp 3033 WRITING FOR THE HEALTH SCIENCES. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

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

Ten wk, ★Sec 50, M, 6-8:30, AmundH 156

Comp 3085 CONFERENCE COURSE IN ADVANCED COMPOSITION. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Individual writing conferences scheduled at student's and instructor's convenience. Interested students should contact the Composition Office (306 Lind Hall, 625-2888) 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 50, Arr

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Computer Science (CSci)

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

Institute of Technology

Textbooks for most CSci courses are available at the Minnesota Book Center in Williamson Hall (625-6000).

Computer Cards—Students who do not have access to a computer will be expected to pay a user fee of \$40 a term for courses that have a formal or an informal laboratory. Check with your instructor on computer requirements if you are considering using a computer of your own. Computer cards are not available until the second week of in-person registration. Payment must be made with a separate check (do not add the computer charge to your tuition check). For information, call the registration office, 101 Wesbrook Hall, at 625-3333.

CSci 3101 AN INTRODUCTION TO COMPUTER APPLICATIONS FOR SCIENTISTS AND ENGINEERS. 4 credits, tuition* (includes \$6 special fee): Resident \$314; Non-resident \$899.20.

Algorithm development and the principles of computer programming using the FORTRAN language, emphasizing numerical methods for science and engineering applications. Integral open laboratory. (Prereq 1 quarter calculus. Limited to 60)

First 5 wk, ★Sec 50, MW, 6-8:50, EE/CSci 3115

Second 5 wk, ★Sec 51, TTh, 6-8:50, EE/CSci 3115

CSci 3113 INTRODUCTION TO PROGRAMMING IN C. 4 credits, tuition*: Resident \$308; Non-resident \$893.20.

Intensive introduction to syntax and semantics of the C language, with introduction to UNIX tools for implementing C programs. Students will write programs, use de-bugging aids, and build libraries. (Prereq 3101 or 3102 or any programming experience and precalculus or #. Limited to 60)

First 5 wk, ★Sec 50, TTh, 6-8:40, EE/CSci 3115

Second 5 wk, ★Sec 51, MW, 6-8:40, EE/CSci 3115

Continuing Education for Women (CEW)

(See page 89)

Cultural Studies and Comparative Literature (CSCL)

(350 Folwell Hall; 624-8099)

College of Liberal Arts

Textbooks for most CSCL courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

See also Humanities.

CSCL 1301 DISCOURSE AND SOCIETY. 4 credits, tuition*: Resident \$274; Non-resident \$794.60. (IS)

General introduction to modes of expression (e.g., verbal, visual, musical) through representative works. Analysis of discourse in relation to social structures, examining its role in creating and contesting social borders, replicating cultures, and attaching differential privilege to various practices. (No prereq. Limited to 30)

Second 5 wk, ★Sec 50, TTh, 6-8:30, FolH 214

CSCL 1303 KNOWLEDGE, PERSUASION, AND POWER. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

Inquiry into the ways certain bodies of discourse come to cohere, to exercise persuasive power, and to be regarded as authoritative, while others are marginalized, ignored, or denigrated. Interrelations of center and periphery, hegemony and counterhegemony, canon and apocrypha. (No prereq. Limited to 30)

First 5 wk, ★Sec 50, TTh, 6-8:30, FolH 214

Dance (Dnce)

(106 Norris Hall; 624-5060)

**Department of Theatre Arts and Dance
College of Liberal Arts**

Textbooks for most Dnce courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Diane Aldis, Teaching Specialist
Joe Chvala, Teaching Specialist
Michael Ellison, Teaching Specialist
Mary Harding, Teaching Specialist
Morris Johnson, Teaching Specialist
Mary B. Lampe, Associate Professor
Linda Stoen, Teaching Specialist

Dance (Dnce) courses at the 1xxx level may be taken S-N by non-Dance majors.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

Dnce 1011 FUNDAMENTAL MODERN I. 1 credit, tuition* (includes \$7 special fee): Resident \$75.50; Non-resident \$205.65.

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

First 5 wk, ★Sec 50, MW, 5:30-7:30, NorrisH 67, Aldis

Dnce 1012 FUNDAMENTAL MODERN II. 1 credit, tuition* (includes \$7 special fee): Resident \$75.50; Non-resident \$205.65.

Introduction to the fundamentals of modern dance techniques, level two. Emphasis on exploring rhythms and dynamics underlying movement. (Prereq 1011. Limited to 20)

Second 5 wk, ★Sec 50, MW, 5:30-7:30, NorrisH 67, Aldis

Dnce 1014 FUNDAMENTAL BALLET I. 1 credit, tuition* (includes \$7 special fee): Resident \$75.50; Non-resident \$205.65.

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

First 5 wk, ★Sec 1, TTh, 5:30-7:30, NorrisH 67, Harding

Dnce 1015 FUNDAMENTAL BALLET II. 1 credit, tuition* (includes \$7 special fee): Resident \$75.50; Non-resident \$205.65.

Fundamentals of classical ballet including barre, center work, and combinations; level two. (Prereq 1014. Limited to 20)

Second 5 wk, ★Sec 50, TTh, 5:30-7:30, NorrisH 67, Harding

Dnce 1017 FUNDAMENTAL JAZZ I. 1 credit, tuition* (includes \$7 special fee): Resident \$75.50; Non-resident \$205.65.

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

First 5 wk, ★Sec 50, TTh, 5:30-7:30, NorrisH 153, Ellison

Dnce 1018 FUNDAMENTALS OF JAZZ II. 1 credit, tuition* (includes \$7 special fee): Resident \$75.50; Non-resident \$205.65.

Basic skills of jazz dance, level two. (Prereq 1017 or equivalent. Limited to 20)

Second 5 wk, ★Sec 50, TTh, 5:30-7:30, NorrisH 153, Ellison

Dnce 1031 BALLROOM DANCE I. 1 credit, tuition* (includes \$7 special fee): Resident \$75.50; Non-resident \$205.65.

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 50, MTWTh, 12:25-1:15, NorrisH 151, Lampe (men only)

First 5 wk, ★Sec 51, MTWTh, 12:25-1:15, NorrisH 151, Lampe (women only)

Dnce 1077 BEGINNING TAPI. 1 credit, tuition* (includes \$7 special fee): Resident \$75.50; Non-resident \$205.65.

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

First 5 wk, ★Sec 50, MTWTh, 4:20-5:20, PeikG 65, Chvala

Dnce 1078 BEGINNING TAP II. 1 credit, tuition* (includes \$7 special fee): Resident \$75.50; Non-resident \$205.65.

The basics of tap. Basic time steps. (Prereq 1077 or equivalent. Limited to 20)

Second 5 wk, ★Sec 50, MTWTh, 4:20-5:20, PeikG 65, Chvala

Dnce 1110 DANCE TOPICS: AFRO-CARIBBEAN. 1 credit, tuition* (includes \$7 special fee): Resident \$75.50; Non-resident \$205.65.

An introduction to the music, rhythms, and dance styles of the Caribbean Islands. (No prereq. Limited to 25)

First 5 wk, ★Sec 50, MW, 5:30-7:30, NorrisH 153

Dnce 1110 DANCE TOPICS: AEROBICS FOR THE DANCER. 1 credit, tuition* (includes \$7 special fee): Resident \$75.50; Non-resident \$205.65.

Low-impact aerobic workout using techniques of modern and jazz. (No prereq. Limited to 25)

First 5 wk, ★Sec 51, MW, 4:20-5:20, NorrisH 153, Stoen

Second 5 wk, ★Sec 52, MW, 4:20-5:20, NorrisH 153, Stoen

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Dnce 3330 DANCE TOPICS: TEACHING AEROBICS. 2 credits, tuition* (includes \$7 special fee): Resident \$149; Non-resident \$418.80.

Develop a core knowledge and practical skills for teaching dance exercise and basic knowledge of human anatomy, kinesiology, and physiology. (Prereq 1003 or 1006. Meets concurrently with PE 3330. Limited to 16)

First 5 wk, ★Sec 50, TTh, 5:30-7, PeikG 65, Stoen

Design, Housing, and Apparel

(240 McNeal Hall: 624-9700)

College of Human Ecology

Textbooks for most Dsgn and DHA courses are available at Books Underground on the St. Paul campus (624-9200)

Timothy T. Blade, Associate Professor

Several courses require access to a computer lab; students in these classes must purchase a micro-computer lab card.

Design (Dsgn)

Dsgn 1301 (formerly 1201) INTRODUCTION TO VISUAL COMMUNICATION AND GRAPHIC DESIGN. 4 credits, §1201, tuition*: Resident \$274; Non-resident \$794.60.

Overview of advertising communications process and creative procedure, terminology, and technology. Explores copywriting, design, typography, production, color separating, printing, photography, and television. Emphasis on designer's relationship with the other specialists. (No prereq. Limited to 28)

First 5 wk, ★Sec 50, TTh, 6-9, McNH 376, StP Campus

Dsgn 1331 (formerly 1531) SURFACE-FABRIC DESIGN I. 4 credits, §1531, tuition* (includes \$35 course fee): Resident \$309; Non-resident \$829.60.

Exploration of surface pattern and composition with varied media and materials: dyeing, resist, batik, stencil, block printing, and others. (Prereq 1521 or 1528, or 1328, 1523 or 1323, 1525 or 1325, Dsgn Comm, Applied Design, Costume Design, Housing, Interior Design, Pre-Interior Design, AScD, Retail Merchandising, Pre-Retail Merchandising, Textiles and Clothing. Limited to 18)

First 5 wk, ★Sec 50, MW, 6-9:55 and arr, McNH B9, StP Campus

Dsgn 3323 (formerly 3523) DESIGN PROCESS: DRAWING II. 4 credits, §3523, tuition*: Resident \$322; Non-resident \$933.80.

Advanced problem solving in drawing with application of design elements and principles. Assignments done both in and out of studio. (Prereq 1523, or 1323, 1525 or 1325, 1528 or 1328, Applied Design, Dsgn Comm, Costume Design, Housing, Interior Design, Retail Merchandising, or Textiles and Clothing, Apparel Science Design student, pass portfolio review. Limited to 20)

Second 5 wk, ★Sec 50, TTh, 6-9:55, McNH 258, StP Campus

Dsgn 3328 (formerly 3521, 3528) DESIGN PROCESS: COLOR II. 4 credits, §3521, 3528, tuition* (includes \$7.50 special fee): Resident \$329.50; Non-resident \$941.30.

Continued study of color concepts and their application to design. Students will also be required to purchase supplies for this class which probably will exceed \$125. (Prereq 1523 or 1323, 1528 or 1328, Applied Design, Dsgn Comm, Costume Design, Housing, Interior Design, pre-Interior Design, Retail Merchandising, pre-Retail Merchandising, or Textiles and Clothing or Apparel Science Design student, pass portfolio review. Limited to 20)

First 5 wk, ★Sec 50, MW, 6-9:55, McNH 262, StP Campus

Dsgn 3334 (formerly 3534) COMPUTER APPLICATIONS TO DESIGN PROBLEMS. 4 credits, §3534, tuition* (includes \$7.50 special fee): Resident \$329.50; Non-resident \$941.30.

Focuses on solutions to the design process using the Macintosh. Students will gain experience in microcomputers, peripherals, and software. *Students are required to purchase a microcomputer lab card.* (Prereq 1523 or 1323, 1525 or 1325, 1528 or 1328, or #. Limited to 20)

First 5 wk, ★Sec 50, TTh, 6-9:55, McNH 305 (Mac Lab), StP Campus

Dsgn 3351 (formerly 3251) GRAPHIC DESIGN I. 4 credits, §3251, tuition* (includes \$7.50 course fee): Resident \$329.50; Non-resident \$941.30.

Layout techniques, materials, structure, color theory. Applications of type style and copyfitting. (Prereq 3355 or 3255, or #. Limited to 24)

Second 5 wk, ★Sec 50, MW, 6-9:55, McNH B3, StP Campus

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

Dsgn 3355 (formerly 3255) TYPOGRAPHIC DESIGN. 4 credits, \$3255, tuition* (includes \$7.50 course fee): Resident \$329.50; Non-resident \$941.30.

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 pass portfolio review for degree program. Limited to 24)

First 5 wk, ★Sec 50, MW, 6-9:55, McNH B3, StP Campus

Dsgn 3356 PRODUCTION FOR THE GRAPHIC DESIGNER. 4 credits, \$3256, tuition* (includes \$7.50 course fee): Resident \$329.50; Non-resident \$941.30.

Investigation of processes and techniques for production of print communication. Fundamentals of keyline, mechanical art production, specification for printing industry. (Prereq pass portfolio review for degree program. Limited to 22)

First 5 wk, ★Sec 50, TTh, 6-9:55, McNH B3, StP Campus

Dsgn 3582 FIELD EXPERIENCE IN DESIGN. 3 credits, tuition*: Resident \$241.50; Non-resident \$700.35.

Supervised 60 hours "on site" exhibition installation during August, 1992. Organizational meeting Sat., Aug. 7, 10 a.m. -4 p.m., at the Creative Activities Building, Minnesota State Fairgrounds, St. Paul. (Limited to 14)

Spec Term, ★Sec 50, Aug. 7-26, Time arr, Days arr. *No late fee through July 31*

Dsgn 5334 (formerly 5534) COMPUTER APPLICATIONS TO DESIGN II. 4 credits, \$5534, tuition* (includes \$7.50 special fee): Resident \$329.50; Non-resident \$941.30; Resident Graduate credit \$647.50; Non-resident Graduate credit \$1287.50.

Solutions to the design process using Macintosh computers. Students use software to combine images and print and explore color and desktop publishing. *Students are required to purchase a microcomputer lab card.* (Prereq 3334 or 3534. Limited to 20)

Second 5 wk, ★Sec 50, MW, 6-9:55, McNH 305 (Mac Lab), StP Campus

Design, Housing, and Apparel (DHA)

DHA 3572 SPECIAL TOPICS IN DESIGN: PRINCIPLES OF ANTIQUE COLLECTING. 4 credits, tuition*: Resident \$322; Non-resident \$933.80.

Investigation into the meaning of objects in the material culture and the significance of collecting as a human endeavor. Introduces practices and procedures of antique buying and selling. (No prereq)

First 5 wk, ★Sec 50, MW, 6-9:30, McNH 376, StP Campus, Blade

Early Childhood Studies Program

(Department of Extension Classes, 306 Westbrook 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 CEE 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

See Area Studies Programs, page 39, and Institute of Languages and Literatures, page 68.

Economics (Econ)

(1035 Management/Economics: 625-6353)
College of Liberal Arts

(See also REX 0244, Gender Issues in Agricultural and Development Economics)

Textbooks for most Econ courses are available at the Harold D. Smith Bookstore on the West Bank campus

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Econ 1101 (formerly 1002)-1102 (formerly 1001) PRINCIPLES OF ECONOMICS. 4 credits each offering, if no credit received for any equivalent course, tuition* each offering: Resident \$274; Non-resident \$794.60. (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 50, MW, 6-7:20, BlegH 420
Ten wk, 1101, ★Sec 51, MW, 7:30-8:50, BlegH 110

Ten wk, 1101, ★Sec 52, TTh, 6-7:20, BlegH 105
Ten wk, 1102, ★Sec 53, MW, 7:30-8:50, BlegH 420

Ten wk, 1102, ★Sec 54, TTh, 7:30-8:50, BlegH 110

Econ 3101 MICROECONOMIC THEORY. 4 credits, §3105 or §BGS 3001, tuition*: Resident \$284; Non-resident \$823.60.

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 50, TTh, 6-7:20, BlegH 225

Educational Psychology (EPsy)

(212 Burton Hall: 626-9392)

College of Education

Textbooks for most EPsy courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Shirley D. Applebee, Teaching Specialist
Shirley Egbert, Teaching Specialist
Amy Hile, Teaching Specialist
Diane Holte, Teaching Specialist
Luanne L. Kowalski, Teaching Specialist
Mary McEvoy, Associate Professor
John E. Rynders, Professor
Albert A. Walla, Teaching Specialist

Note: American Sign Language courses can be used to complete a second language requirement. Contact CEE Counseling (625-2500) with questions.

American Sign Language Classes: 330 Wulling Hall: 626-9392

EPsy 1601 AMERICAN SIGN LANGUAGE I. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25.

Introduces fundamentals of American Sign Language as a second language. Emphasis is placed on varieties of sign language and sign language practices, questions, commands, and simple sentences. Receptive and Expressive sign vocabulary building are featured. **May be taken S-N.** (No prereq. Limited to 25)

Spec Term, ★Sec 50, MTWThF, June 30-July 16, 12-2:15, WulIH 230, Holte

Second 5 wk, ★Sec 51, MTWTh, 9:15-11:30 a.m., WulIH 130, Holte

EPsy 1602 AMERICAN SIGN LANGUAGE II. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25.

Introduces fundamentals of American Sign Language as a second language beyond the basic level. Emphasis is placed on locatives, classifiers, and temporal and distributional aspects. Receptive and Expressive sign vocabulary building are featured at the conversational level. **May be taken S-N.** (Prereq 1601 or #. Limited to 25)

First 5 wk, ★Sec 50, MTWTh, 9:15-11:30 a.m., EltH N647, Kowalski

Second 5 wk, ★Sec 51, MTWTh, 1-3:15, EltH N647, Holte

EPsy 1603 AMERICAN SIGN LANGUAGE III. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25.

Expands on the conversational use of American Sign Language as a second language including grammar, deaf culture, short stories, and narratives. Receptive and Expressive use of ASL will be stressed at the conversational level. **May be taken S-N.** (Prereq 1602 or #. Limited to 25)

First 5 wk, ★Sec 50, MTWTh, 1-3:15, EltH N647, Kowalski

Second 5 wk, ★Sec 51, MTWTh, 9:15-11:30 a.m., EltH N647, Walla

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

EPsy 3601 AMERICAN SIGN LANGUAGE IV. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25.

Stresses conversational use of American Sign Language and culturally significant topics relating to the deaf community, complex use of ASL, grammatical features and vocabulary expansion. Comprehension and expression of jokes, dialogues, stories are emphasized. **May be taken S-N.** (Prereq 1603. Limited to 25)

First 5 wk, ★Sec 50, MTWTh, 9:15-11:30 a.m., AkerH 309, Egbert

Second 5 wk, ★Sec 51, MTWTh, 1-3:15, WulH 130, Walla

EPsy 3602 AMERICAN SIGN LANGUAGE V. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25.

Stresses common conversational use of American Sign Language and culturally significant topics relating to the deaf community. Idiomatic use of sign in conversation and expansion of vocabulary are introduced. Comprehension and expression of common conversational topics and idiomatic expressions are emphasized. **May be taken S-N.** (Prereq 3601. Limited to 25)

First 5 wk, ★Sec 50, MTWTh, 1-3:15, WulH 130, Egbert

Second 5 wk, ★Sec 51, MTWTh, 1-3:15, WulH 230, Applebee

EPsy 5702 WORKSHOP: SPECIAL EDUCATION. Credits arranged, tuition* each credit: Resident \$77; Non-resident \$223.30; Resident Graduate credit \$94; Non-resident Graduate credit \$188.

Laboratory approach; provides opportunities for school personnel to study specific problems related to special education. **Focus this offering:** *Educational Interventions for Infants with Handicaps: A Collaborative Summer Institute.* The summer institute is a collaborative offering of the Minnesota Department of Education and a consortium of colleges and universities in the state with approved licensure programs in Early Childhood Special Education. The institute will focus on educational interventions for infants with handicaps, looking particularly to strengthening family support systems, community integration, and techniques for promoting language, motor, and other abilities. **Must be taken A-F.** For further information about this workshop: 215 Pattee Hall; telephone 626-7819. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 35)

Spec Term, ★Sec 50, MTW, Aug. 9-11, 8 a.m.-4:30 and 6-8, St. John's University, Collegeville, Minn., McEvoy, Rynders

Elementary Education (Elem)

(125 Peik Hall: 625-6372)

College of Education

(Department of Curriculum and Instruction)

Textbooks for most Elem courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Donald Fondrick, Teaching Specialist

Elem 3610 PRE-FALL STUDENT TEACHING: FULL DAYS. 3 credits, tuition*: Resident \$231; Non-resident \$669.90.

Observing and teaching during the beginning of the school year; begins with fall semester opening of public schools and continues until University classes begin. **Must be taken SN.** (Prereq 9 cr methods, Δ)

Spec Term, Sec 50, MTWThF, 9 a.m.-4, Aug. 30-Sept. 22, Selected Metro Public Schools

Elem 5347 WORKSHOP: CURRICULUM IMPLEMENTATION IN ELEMENTARY SCHOOL SCIENCE. 1-3 credits (maximum 12 cr). 3 credits this offering, tuition*: Resident \$231; Non-resident \$669.90; Resident Graduate credit \$282; Non-resident Graduate credit \$564.

Offered in summers with focus on a single program for each offering: treating concept foundations, goals, and teaching and evaluation procedures. **Must be taken A-F.** (Prereq elem tch exper. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Telephone (612) 625-6372 for information.

English

(207 Lind Hall: 625-3363)

College of Liberal Arts

Textbooks for most Engl and EngW courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Christopher Anson, Associate Professor
Robin Brown, Associate Professor
Michael Dennis Browne, Professor
Maria Damon, Assistant Professor
Genevieve Escure, Professor
David Haley, Associate Professor
Betty Joseph, Lecturer in English
David Luke, Assistant Professor
Edward Savage, Professor Emeritus
Joel Weinsheimer, Professor

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

English Language and Literature courses (Engl)

(Creative writing and editing classes are in the Creative and Professional Writing (EngW) section that follows. See other literature courses in The Compleat Scholar noncredit section)

Continuing Education for Women (CEW) section available in the following course: Engl 3671

Engl 1005 INTRODUCTION TO LITERATURE. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

Understanding and enjoying literature. Readings of novels, short stories, poems, and plays. (No prereq. Limited to 38)

First 5 wk, ★Sec 50, TTh, 6-8:30, MurH 308

Second 5 wk, ★Sec 51, MW, 6-8:30, MurH 308

Engl 1016 INTRODUCTION TO AMERICAN LITERATURE. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

Critical discussion of and writing about selected works of American literature. Typical authors: Poe, Hawthorne, Whitman, Dickinson, Twain, Frost, Fitzgerald, Hurston. (No prereq. Limited to 40)

First 5 wk, ★Sec 50, MW, 6-8:30, LindH 217

Second 5 wk, ★Sec 51, TTh, 6-8:30, LindH 217

Engl 1018 INTRODUCTION TO MODERN FICTION. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

Critical discussion of and writing about selected modern novels and stories. Typical authors: Conrad, Lawrence, Joyce, Woolf, Cather, Hemingway, Faulkner, Nabokov. (No prereq. Limited to 40)

First 5 wk, ★Sec 50, TTh, 6-8:30, LindH 340

Second 5 wk, ★Sec 51, MW, 6-8:30, LindH 340

Engl 1591 LITERATURE OF AMERICAN MINORITIES. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

Representative works by Afro-American, American Indian, Asian American, and Chicano/Chicana writers. Examination of relevant social factors. (No prereq. Limited to 38)

First 5 wk, ★Sec 50, TTh, 6-8:30, FordH 150

Second 5 wk, ★Sec 51, MW, 6-8:30, LindH 229

Engl 1595 INTRODUCTION TO "THIRD WORLD" LITERATURES IN ENGLISH. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

Overview of work produced in English outside the United States and Britain. Works represent different cultures, but treat concerns from common (post-) colonial legacy: politics of language, psychology of colonization, implication of colonial education, culture as resistance to domination. Typical artists include novelists Chinua Achebe (Nigeria), Tsitsi Dangarembga (Zimbabwe), Fadia Faqir (Palestine), Salman Rushdie (India), filmmaker Kidlat Tahimik (Philippines), and "dub" poets Mutabaruka and Jena Binta Breeze (Jamaica). (No prereq. Limited to 40)

Second 5 wk, ★Sec 50, TTh, 6-8:30, LindH 229

Engl 1621 INTRODUCTION TO WOMEN WRITERS. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

Works by several major women writers from Great Britain and the United States. Novels, short stories, poetry, and drama. (No prereq. Limited to 38)

First 5 wk, ★Sec 50, MW, 6-8:30, LindH 215

Engl 3008 TECHNIQUES OF LITERARY STUDY. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Training and practice in the analysis of various literary forms, with a special emphasis on poetry. Use of argument, evidence, and documentation in literary papers; introduction to major developments in contemporary criticism. (No prereq. Limited to 30)

First 5 wk, ★Sec 50, MW, 6-8:30, AmundH 158

Engl 3241 SHAKESPEARE. 4 credits, \$3243, tuition*: Resident \$284; Non-resident \$823.60.

Plays from Shakespeare's early and middle periods. All sections read *A Midsummer Night's Dream*, *Hamlet*, a history play, and two or three others. (No prereq. Limited to 30)

Second 5 wk, ★Sec 50, TTh, 6-8:30, LindH 305, Haley

Engl 3242 SHAKESPEARE. 4 credits, \$3243, tuition*: Resident \$284; Non-resident \$823.60. (IS)

Plays from the middle and late periods. All sections read *King Lear*, *Macbeth*, *The Tempest*, and two or three others. (No prereq. Limited to 30)

Second 5 wk, ★Sec 50, TTh, 6-8:30, LindH 203, Sugnet

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

Engl 3671 THE NOVEL. 4 credits, tuition*: Resident \$284; Non-resident \$823.60. (IS)

The novel as a literary form. Readings of selected works of fiction from the 18th century to the present. (No prereq. Limited to 40)

First 5 wk, ★Sec 50, MW, 9-11:30 a.m., MacP Annex 1, Joseph. Offered through Continuing Education for Women.

Engl 3851 THE ENGLISH LANGUAGE. 4 credits, §5851, tuition*: Resident \$284; Non-resident \$823.60. (IS)

The English language: its structure (phonetics, phonology, morphology, syntax, semantics) and its use (pragmatics, dialect variation, and first language acquisition). (No prereq. Limited to 40)

First 5 wk, ★Sec 50, MW, 6-8:30, EE/CSci 3230, Brown

Second 5 wk, ★Sec 51, MW, 6-8:30, EE/CSci 3230, Anson

(See also REX 0902, The Origin of English Words)

Engl 3960 JUNIOR-SENIOR SEMINAR: POETRY AS CULTURAL CRITIQUE. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Examines the status of "poetry" in several cultures of the Americas, bringing together techniques of close reading and broad cultural inquiry. Issues such as the ethics and politics of "ethnopoetics" and cross-cultural pollination; the role of poetry in shaping political consciousness (the Negritude movement, for example, or the spate of women's, gay, ethnic anthologies that came out of the late '60s in the U.S.); and poetry as the interface (suture) of dominant and non-dominant cultures. Primarily 20th-century poetry of the Englishspeaking world (but some texts in translation), poetry theory, and ethnographic texts and historical texts. Contact the English Undergraduate Office at (612) 625-4592 for department permission. (Prereq English major status, completion of Comp 3011 or 3012, jr or sr and written Δ. Limited to 17)

Second 5 wk, ★Sec 50, MW, 6-8:30, LindH 216, Damon

Engl 3961 SENIOR PAPER. 1 credit, tuition*: Resident \$71; Non-resident \$205.90.

Required of English majors, usually taken in the senior year. May be taken concurrently with 3960.

Must be taken S-N. Interested students should call the English department at (612) 625-4592 with questions. (Prereq English major, sr, Engl 3960 or 3960H, or 3931-3932, or EngW 3960; written Δ. Limited to 40)

Second 5 wk, ★Sec 50, Arr

Engl 5152 19TH-CENTURY ENGLISH NOVEL. 4 credits, tuition*: Resident \$284; Non-resident \$823.60; Resident Graduate credit \$640; Non-resident Graduate credit \$1280.

Novels by such authors as Scott, Dickens, the Brontës, Thackeray, Eliot, Hardy. (Prereq grad or Engl major or Δ. Qualified students may register for graduate credit at the University of Minnesota. Limited to 40)

First 5 wk, ★Sec 50, TTh, 6-8:30, LindH 302, Luke

Engl 5221 CHAUCER: THE CANTERBURY TALES. 5 credits, tuition*: Resident \$355; Non-resident \$1029.50; Resident Graduate credit \$800; Non-resident Graduate credit \$1600.

Reading *The Canterbury Tales*; introduction to Chaucer's language. (Prereq grad or Engl major or Δ. Qualified students may register for graduate credit at the University of Minnesota. Limited to 40)

First 5 wk, ★Sec 50, TTh, 6-8:30, BlegH 330, Savage

Engl 5851 STRUCTURE OF MODERN ENGLISH. 4 credits, §3851, tuition*: Resident \$284; Non-resident \$823.60; Resident Graduate credit \$640; Non-resident Graduate credit \$1280.

Survey of modern English grammar: phonology, syntax, and semantics; variations and change. (Prereq grad or Engl major or Δ. Qualified students may register for graduate credit at the University of Minnesota. Limited to 40)

Second 5 wk, ★Sec 50, TTh, 6-8:30, LindH 302, Escuré

Creative and Professional Writing (EngW)

(224 Lind Hall: 625-6366)

(See also writing courses in Composition and in The Compleat Scholar noncredit section)

EngW 1102 INTRODUCTION TO FICTION WRITING. 4 credits, §Engl 1101, §Comp 1101, 1113, tuition*: Resident \$274; Non-resident \$794.60. (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 EngW 1101 or equivalent. Limited to 25)

First 5 wk, ★Sec 50, MW, 6-8:30, HHCtr 20

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

EngW 1103 INTRODUCTION TO POETRY WRITING. 4 credits, §Engl 1104, §Comp 1104, 1111, tuition*: Resident \$274; Non-resident \$794.60. (IS)

Beginning instruction in the art of poetry. Discussion of student poems and contemporary poetry, ideas for generating material, and writing exercises both in and out of class. (Prereq fulfillment of writing practice requirement or EngW 1101. Limited to 25)

Second 5 wk, ★Sec 50, TTh, 6-9, LindH 315

EngW 5130 TOPICS IN ADVANCED CREATIVE WRITING. 4 credits, tuition*: Resident \$284; Non-resident \$823.60; Resident Graduate credit \$640; Non-resident Graduate credit \$1280.

Advanced workshop that may include work in either prose or poetry. Students not in the graduate program in creative writing must submit an application packet, including a 10-page manuscript, for this course by Fri., May 15; for further information, call the creative writing program office: 625-6366. (Prereq grad or Engl undergrad major or Δ. Qualified students may register for graduate credit at the University of Minnesota. Limited to 15)

First 5 wk, ★Sec 50, TTh, 6-9, LindH 320, Browne

English as a Second Language (ESL)

(102 Klaeber Court: 624-1503)

College of Liberal Arts

Textbooks for most ESL courses are available at the Minnesota Book Center in Williamson Hall (625-6000).

Students registering for ESL courses must take one of the following tests: The Minnesota Battery of English Language Proficiency (MBatt) or the Test of English as a Foreign Language (TOEFL), or the Michigan English Language Assessment Battery (MELAB). Arrangements to take one of these tests can be made through the Minnesota English Center. Arrangements for taking the test must be completed well in advance of registration. Call 624-1503 for information. After receiving the test score, contact CEE Counseling, 625-2500, for registration information.

ESL 0326 (formerly 0125) DEVELOPING FLUENCY IN ENGLISH AS A SECOND LANGUAGE. No credit, (includes \$5 course fee each quarter): \$347.50 each quarter.

An advanced course for non-native speakers who want to improve their communication skills for social, academic, and professional purposes; emphasis is placed on listening and speaking; content is drawn from the mass media. **Must be taken S-N.** (Prereq a satisfactory score on the MBatt or TOEFL; and written permission from CEE Counseling, 314 NCC [625-2500]. Limited to 20)

Ten Wk, ★Sec 50, TTh, 6:20-8:50, KoltH S139

Family Social Science (FSoS)

(290 McNeal Hall: 625-1900)

College of Human Ecology

(See also REX 0260, Impact of Sexual Abuse Treatment on Family Functioning and REX 0261, Relationships in Adoptive Families)

Textbooks for most FSoS courses are available at Books Underground on the St. Paul campus (624-9200)

Pauline G. Boss, Professor
 Philip L. Colgan, Director, Alcohol and Drug Counseling Education Program
 Daniel F. Detzner, Associate Professor
 William J. Doherty, Professor
 Constance Fabunmi, Instructor
 William Goodman, Coordinator
 James W. Maddock, Associate Professor
 David H. Olson, Professor
 Kathryn R. Rettig, Professor
 Paul C. Rosenblatt, Professor

FSoS 1001 DYNAMICS OF FAMILY RELATIONSHIPS. 4 credits, tuition* (includes \$1 special fee): Resident \$275; Non-resident \$795.60.

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

First 5 wk, Sec 50, TTh, 6-8:30, McNH 197, StP Campus

(See also REX 0260, Impact of Sexual Abuse Treatment on Family Functioning)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

FSoS 1025 PARENTHOOD. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

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) First 5 wk, Sec 50, MW, 6-8:30, McNH 197, StP Campus

FSoS 5230 INDEPENDENT STUDY IN FAMILY SOCIAL SCIENCE. 1-3 credits (maximum 16 cr), tuition* each credit: Resident \$80.50; Non-resident \$233.45; Resident Graduate credit \$160; Non-resident Graduate credit \$320.

Independent reading or research under faculty supervision. (Prereq #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

First 5 wk, ★Sec 50, Arr

FSoS 5240 SPECIAL TOPICS: MEDICAL FAMILY THERAPY. 3 credits, tuition*: Resident \$241.50; Non-resident \$700.35; Resident Graduate credit \$480; Non-resident Graduate credit \$960.

Overview of the emerging specialty of medical family therapy, which deals with families facing chronic illness, disability, and health lifestyle problems. Emphasis on both theoretical and practical issues in medical family therapy. (Prereq course in family therapy and written #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Spec Term, ★Sec 50, F, 8:30 a.m.-5, July 23, 30, Aug. 6, McNH 278, StP Campus, Doherty

FSoS 5240 SPECIAL TOPICS: ISSUES OF LOVE AND MONEY IN COUPLE AND FAMILY THERAPY. 2 credits, tuition*: Resident \$161; Non-resident \$466.90; Resident Graduate credit \$320; Non-resident Graduate credit \$640.

Addresses the relation issues which accompany the approaches individuals, couples, and families take to handle financial resources. Topics to be addressed include financial issues and family types, financial challenges and the life cycle, personality characteristics and financial management, and communication and intimacy as influenced by financial issues. (Prereq course in family therapy and written #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 24)

Spec Term, ★Sec 51, W, 9 a.m.-5, July 28, Aug 4, McNH 375, StP Campus, Colgan

FSoS 5240 SPECIAL TOPICS: FAMILY SYSTEMS AND ALCOHOL AND DRUG USE. 2 credits, tuition*: Resident \$161; Non-resident \$466.90; Resident Graduate credit \$320; Non-resident Graduate credit \$640.

Family Systems approach to etiology, intervention, treatment, and aftercare of families experiencing issues with alcohol and drug use. Cultural and policy issues examined. (Prereq course in family therapy and written #. Qualified students may register for graduate credit at the University of Minnesota)

Spec Term, Sec 52, Th, 9 a.m.-5, July 29, Aug 5, McNH 375, StP Campus, Goodman

FSoS 5240 SPECIAL TOPICS: SUPERVISION OF MARITAL AND FAMILY THERAPY. 3 credits, tuition*: Resident \$241.50; Non-resident \$700.35; Resident Graduate credit \$480; Non-resident Graduate credit \$960.

For marriage and family therapists who want to become supervisors, this course is designed to meet didactic and interactional course requirements for the Approved Supervisor designation as stipulated by the American Marriage and Family Therapy Association (AAMFT). Topics included are theories of supervision, structures for supervision (e.g., individual, group, team, and co-therapy), methods of supervision (e.g., live, video, case presentation), the evaluation process, and legal/ethical issues. Also covered are therapist-client-supervisor relationships, potential problems, and contextual issues. (Prereq 8214 or equivalent written #. Qualified students may register for graduate credit at the University of Minnesota) Spec Term, Sec 53, FSA, 8 a.m.-12, July 30, 31, Aug 6, 7, 13, 14, McNH 375, StP Campus, Boss

FSoS 5241 LEGAL-ECONOMIC CONTROVERSIES IN FAMILY LIFE. 4 credits, tuition*: Resident \$322; Non-resident \$933.80; Resident Graduate credit \$640; Non-resident Graduate credit \$1280.

Interdisciplinary seminar on legal-economic controversies across the family life span for diverse family forms. Includes alternative family definitions and living arrangements; premarital and marital contracts; alternative means of parenting; income, support, and debt issues; property transfer at death and divorce; decision making for health, long-term care, and advance directives. (Prereq 3260 or 3600 or 5200 or #. Qualified students may register for graduate credit at the University of Minnesota)

Second 5 wk, Sec 50, MW, 5-7:30, McNH 278, StP Campus, Rettig

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

FSoS 5242 DEATH, OTHER LOSSES, AND THE FAMILY. 3 credits, tuition*: Resident \$241.50; Non-resident \$700.35; Resident Graduate credit \$480; Non-resident Graduate credit \$960. Individual and family reactions to dying, death, and other losses or potential losses from perspective of theories of grief work, family systems, others. (Prereq 5202 or equivalent. Qualified students may register for graduate credit at the University of Minnesota)

First 5 wk, Sec 50, TTh, 4-6:30, McNH, StP Campus, Rosenblatt

FSoS 5252 AGING, FAMILY, AND SOCIETY. 4 credits, tuition*: Resident \$322; Non-resident \$933.80; Resident Graduate credit \$640; Non-resident Graduate credit \$1280.

Elderly populations from diverse cultures examined within context of individual life history, family systems, and social structure. (Prereq 5200 or SW 5024 or equivalent. Qualified students may register for graduate credit at the University of Minnesota) First 5 wk, Sec 50, TTh, 6-8:30, McNH 278, StP Campus, Detzner

Alcohol and Drug Counseling Education Program

(388 McNeal Hall: 625-3778)

For information about the Alcohol and Drug Counseling Education Certificate, see the 1992-93 Extension Classes Bulletin, page 706. To receive a formal application for the certificate program, write Alcohol and Drug Counseling Education Program, Family Social Science, University of Minnesota, 388 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, tuition*: Resident \$322; Non-resident \$933.80.

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 50, W, 6-9:30, June 16-July 28, McNH 274, StP Campus and Sa, 9 a.m.-5, June 26, McNH 274, StP Campus, Colgan

FSoS 3032 CHEMICAL ABUSE AND THE FAMILY: AN OVERVIEW. 4 credits, tuition*: Resident \$322; Non-resident \$933.80.

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 50, ThFSa, 9 a.m.-5, July 15-17, McNH 274, StP Campus and Th, 6-10, July 22, 29, McNH 274, StP Campus, Colgan

FSoS 3034 TOPICS IN ALCOHOL AND DRUG ABUSE. 1-5 credits, tuition* each credit: Resident \$80.50 a credit; Non-resident 233.45.

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 the Alcohol and Drug Counseling Education Program, 388 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 50, Arr, Fabunmi, Colgan, Goodman

FSoS 3035 CLINICAL INTERNSHIP IN CHEMICAL ABUSE PROBLEMS. 2-18 credits, tuition* each credit (includes \$25 special fee for each placement): Resident \$80.50; Non-resident \$233.45.

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, 3029, 3030, 3032, 3037 and written #)

Ten wk, Sec 50, Arr, Fabunmi

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

FSoS 3037 GROUP THERAPY: THEORY AND PRACTICE. 3 credits, tuition*: Resident \$241.50; Non-resident \$700.35.

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 20)

Spec Term, ★Sec 50, ThFSa, 9 a.m.-5, July 8-10, McNH 274, StP Campus, Colgan, Fabunmi

FSoS 5008 INTROSPECTIVE WORKSHOP AND CLINICAL SUPERVISION. 1 or 2 credits, tuition* each credit: Resident \$80.50; Non-resident \$233.45; Resident Graduate credit \$160; Non-resident Graduate credit \$320.

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

Ten wk, Sec 50, Arr, Fabunmi

FSoS 5029 COUNSELING SKILLS PRACTICUM I. 4 credits, tuition*: Resident \$322; Non-resident \$933.80; Resident Graduate credit \$640; Non-resident Graduate credit \$1280.

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 50, W, 6-9:30, June 16-July 28, McNH 274, StP Campus; and Sa, 9 a.m.-5, June 26, McNH 274, StP Campus, Colgan

FSoS 5032 CHEMICAL ABUSE AND THE FAMILY: AN OVERVIEW. 4 credits, tuition* : Resident \$322; Non-resident \$933.80; Resident Graduate credit \$640; Non-resident Graduate credit \$1280.

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 50, ThFSa, 9 a.m.-5, July 15-17, McNH 274, StP Campus and Th, 6-10, July 22, 29, McNH 274, StP Campus, Colgan

FSoS 5034 TOPICS IN ALCOHOL AND DRUG ABUSE. 1-5 credits, tuition* each credit: Resident \$80.50; Non-resident \$233.45; Resident Graduate credit \$160; Non-resident Graduate credit \$320.

See course description and prerequisites for 3034. Requests for permission to register must be made to the Alcohol and Drug Counseling Education Program, 388A 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 50, Arr, Fabunmi, Colgan, Goodman

FSoS 5035 CLINICAL INTERNSHIP IN CHEMICAL ABUSE PROBLEMS. 2-18 credits, tuition* each credit (includes \$25 special fee [placement fee]): Resident \$80.50; Non-resident \$233.45; Resident Graduate credit \$160; Non-resident Graduate credit \$320.

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 50, Arr, Fabunmi

FSoS 5037 GROUP THERAPY: THEORY AND PRACTICE. 3 credits, tuition*: Resident \$241.50; Non-resident \$700.35; Resident Graduate credit \$480; Non-resident Graduate credit \$960.

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 20)

Spec Term, ★Sec 50, ThFSa, 9 a.m.-5, July 8-10, McNH 274, StP Campus, Colgan, Fabunmi

Finance (BFin)

(735 Management/Economics: 624-2888)

Carlson School of Management

Textbooks for most BFin courses are available at the Harold D. Smith Bookstore on the West Bank campus (625-3000)

Jaeuk Khil, Teaching Assistant

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

BFin 3000 FINANCE FUNDAMENTALS. 4 credits, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20. (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 1050 and at least 90 cr completed or in progress. May not be taken S-N. Limited to 50) First 5 wk, ★Sec 50, MW, 6-9, BlegH 150, Khil (See also PSch 0906, Investments and Personal Financial Planning)

French (Fren)

(260 Folwell Hall: 624-4308)
College of Liberal Arts

Textbooks for most Fren courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

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, tuition*: \$274. (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 an examination in French. Students successfully completing the course should obtain the Language Certification form from the Graduate School and present it to the department for signature. **Must be taken S-N.** (No prereq)

First 5 wk, Sec 50, MTh, 6-8:30, AmundH 116

Fren 1104 INTERMEDIATE FRENCH. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25.

Discussion of literary and cultural readings. Grammar review and development of writing skills. (Prereq 1103 or #. Limited to 25)

First 5 wk, ★Sec 50, MTh, 6-8:50, FolH 138

First 5 wk, ★Sec 51, MTh, 6-8:50, FolH S134

Fren 1105 INTERMEDIATE FRENCH. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25.

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 50, MTh, 6-8:50, FolH 138

French and Italian (FrIt)

(260 Folwell Hall: 624-4308)
College of Liberal Arts

Textbooks for most FrIt courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

FrIt 3604 CINEMAS OF THE REAL. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

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 50, MW, 6-8:30, FolH 208

General College (GC)

(109 Appleby Hall: 625-6663)

Textbooks for most GC courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Lisa D. Albrecht, Associate Professor
Fred Amram, Professor
Douglas Dearden, Professor
Joan Garfield, Associate Professor
Jill Gidmark, Professor
David Giese, Professor
Fred A. Johnson, Associate Professor
Peter Kahn, Assistant Professor
Laura Koch, Assistant Professor
Patrick Kroll, Associate Professor
Sander Latts, Associate Professor

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

Shari Peterson, Assistant Professor
Ivan Policoff, Associate Professor
Douglas Robertson, Professor
Gail Thoen, Assistant Professor
Robert Yahnke, Professor
Candido Zanoni, Professor

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 II, 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 I. 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 I. No credit, §1445, tuition*: \$342.50. (IS)

For students with adequate background in elementary algebra. Sets, real numbers, linear equations, linear inequalities, absolute value equations and inequalities, exponents, polynomials, systems of equations, word problems, rational expressions, roots and radicals, complex numbers. (Prereq GC Math Level D or GC 0621 with grade of C or better or GC 1435. Limited to 30)

Ten wk, ★Sec 50, W, 5:30-8:30, ApH 103, Johnson
(See also PSch 0662, Elementary Algebra)

GC 0631 INTERMEDIATE ALGEBRA, PART II. No credit, §1446, tuition*: \$342.50. (IS)

Basic knowledge of linear and quadratic equations and inequalities, exponents, factoring, rational expressions, roots, radicals, complex numbers, and graphing assumed. Topics include quadratic equations, matrix solutions to systems of equations, general inequalities, conic sections, functions, logarithmic and exponential functions, introduction to sequences, series, and binomial theorem. (Prereq GC math level E or GC 0625 with grade of C or better or GC 1445. Limited to 35)

Ten wk, ★Sec 50, TTh, 5:30-8, ApH 303, Giese

GC 0643 BASIC MATHEMATICS: PROGRAMMED STUDY. No credit, tuition*: \$342.50.

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 GC math level B or C or 0641. Limited to 30)

Ten wk, ★Sec 50, M, 5-8, ApH 9, Koch

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

General College Course Offerings

GC 1134 CARDIOVASCULAR ANATOMY AND PHYSIOLOGY. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

Names, location, and structure of the parts of the circulatory system. Normal functions of these body parts are described, with an explanation of their common abnormalities and diseases. (Prereq GC 1132 or equivalent. Limited to 40)

First 5 wk, ★Sec 50, MW, 4-6:30, SciCB 125, Dearden

GC 1283 PSYCHOLOGY OF HUMAN DEVELOPMENT. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25. (IS)

Focuses on growth and development of individual from conception through old age. Physical, motor, social, emotional, and psychological growth, and cognitive development. Integrated view of facets of development in order to understand human being as a complex organism functioning in a complex environment. The family as the main environmental factor in early development of individual. (No prereq. Limited to 35)

First 5 wk, ★Sec 50, MW, 5:30-9, ApH 223, Latts

GC 1374 THE MOVIES: AN INTRODUCTORY COURSE. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

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 35)

First 5 wk, ★Sec 50, MW, 6-9, ApH 302, Yahnke

GC 1422 WRITING LABORATORY: COMMUNICATING IN SOCIETY. 4 credits, \$1423, tuition*: Resident \$274; Non-resident \$794.60.

Primarily through expository writing, but also through reading and discussion, students analyze how people communicate in society: how they perceive events and ideas, how they think and write about them. Extensive writing practice. Requires use of a computer. Microcomputer instruction; uses Macintosh PC. (Prereq 1421. Limited to 18)

Second 5 wk, ★Sec 50, MW, 5-7:30, ApH 219, Albrecht

GC 1454 STATISTICS. 4 credits, tuition*: Resident \$274; Non-resident \$794.60. (IS)

Introduction to modern statistics, emphasizing problem solving and hands-on experience with real data. Topics include summary statistics, sampling, probability, distributions, estimation, and hypothesis testing. (Prereq GC math level D or elementary algebra. Limited to 30)

First 5 wk, ★Sec 50, MW, 5-7:30, ApH 303, Garfield

GC 1456 FUNCTIONS AND PROBLEMS OF LOGIC. 4 credits, \$1442, tuition*: Resident \$274; Non-resident \$794.60.

Introduction to logical thinking. Students apply critical analysis and techniques of precise reasoning to various types of discourse and argument, and develop habits of systematic thinking by learning about complexities of language, difference between good and bad evidence, and methods of deductive and inductive reasoning. (No prereq. Limited to 30)

First 5 wk, ★Sec 50, TTh, 5:30-8, ApH 223, Zanoni

GC 1461 ORAL COMMUNICATION: SPEAKING AND CREATIVE THINKING. 4 credits, tuition* (includes \$10 course fee): Resident \$284; Non-resident \$804.60.

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 50, TTh, 5-7:30, ApH 102, Amram

GC 1513 SMALL BUSINESS OPERATIONS. 4 credits, tuition*: Resident \$274; Non-resident \$794.60. (IS)

Students evaluate opportunities to start a small business or to purchase an existing one. Topics include financing the business; marketing products; administering key resources; organizing, controlling, and writing the business plan. Designed for people who plan to own or operate a small business in a marketing-related area. (No prereq. Limited to 35)

First 5 wk, ★Sec 50, TTh, 5:30-8, ApH 226, Kroll

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

GC 1534 PRACTICAL LAW. 4 credits, tuition*: Resident \$274; Non-resident \$794.60. (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 35)

Second 5 wk, ★Sec 50, MW, 6-8:30, ApH 226, Kahn

GC 1551 MARKETING: INTRODUCTION. 4 credits, tuition*: Resident \$274; Non-resident \$794.60. (IS)

Product pricing, distribution, and promotional principles; target market and segmentation analysis; current marketing strategies and trends. (No prereq. Limited to 35)

First 5 wk, ★Sec 50, MW, 5-7:30, ApH 226, Peterson

GC 1571 INTRODUCTION TO MICROCOMPUTER APPLICATIONS. 5 credits, tuition* (includes \$10 course fee): Resident \$352.50; Non-resident \$1003.25. (IS)

Introduction to IBM microcomputer applications including microcomputer components, operating system (DOS), word processing, spreadsheet, and database management software. Hands-on laboratory emphasizes solving problems using popular microcomputer applications software. All homework assignments done on computers. (Prereq elementary algebra. Meets concurrently with 1572. Limited to 20)

Ten wk, ★Sec 50, T, 5-8, ApH 319, Robertson

GC 1572 INTRODUCTION TO COMPUTER PROGRAMMING. 5 credits, \$1535, tuition* (includes \$10 course fee): Resident \$352.50; Non-resident \$1003.25. (IS)

Experience using microcomputer as problem-solving tool. Students design, write, code, and run computer programs on IBM microcomputers. Emphasis on writing properly structured and documented BASIC programs to solve problems from social sciences. Provides excellent background for further programming courses. (Prereq 1571 or IBM microcomputer experience. Meets concurrently with 1571. Limited to 10)

Ten wk, ★Sec 50, T, 5-8, ApH 319, Robertson

GC 1733 CONTEMPORARY SEX ROLES. 4 credits, tuition*: Resident \$274; Non-resident \$794.60. (IS)

Social roles and related expectations, informal and formal roles, role modification, and role reversal. Overcoming sexual stereotyping. Focus on analyzing the openness and rigidity of sex roles in childhood socialization; education; mate selection; marital, parental, and homemaking roles; occupations; and social trends. (No prereq. Limited to 35)

Ten wk, ★Sec 50, T, 5:30-8, ApH 103, Thoen

GC 1836 ASIAN-AMERICAN LITERATURE. 4 credits, tuition*: Resident \$274; Non-resident \$794.60. (IS)

Examines the Asian experience in America, both historical and contemporary, through literary works produced by Asian-Americans. (No prereq. Limited to 35)

Second 5 wk, ★Sec 50, TTh, 5-7:30, ApH 302, Gidmark

German (Ger)

(231 Folwell Hall: 625-2080)

College of Liberal Arts

(See also REX 0904, The German Language in Minnesota)

Anatoly Liberman, Professor
Wolfgang Taraba, Professor
Ray Wakefield, Associate Professor
Margrit Zinggeler, Teaching Assistant

Textbooks for most Ger courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Ger 1000 INDIVIDUALIZED GERMAN FOR NON-DEGREE CREDIT. 2-5 credits (maximum 5 cr), \$1101, tuition* each credit: Resident \$68.50; Non-resident \$198.65.

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. See Ger 1110 description below for registration information. The continuation course is 1110 or 1102. (No prereq. Limited to 30)

Ten wk, ★Sec 50, W, 6-8:30, WaLib 15

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Ger 1103 BEGINNING GERMAN. 5 credits, §1110, tuition*: Resident \$342.50; Non-resident \$993.25.

Third quarter of German language. Classroom instruction with 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 50, MTh, 6-8:30, FolH 240

Ger 1110 INDIVIDUALIZED BEGINNING GERMAN. 1-10 credits (maximum 10 cr), §1102-1103; tuition* each credit: Resident \$68.50; Non-resident \$198.65.

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. Teacher 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 Westbrook Hall Registration Office to pay for the additional credits. No refunds will be given for uncompleted credits. The continuation course is 1104. (Prereq 1101, 5 cr 1000, or placement. Limited to 60)

Ten wk, ★Sec 50, W, 6-8:30, WaLib 15

Ger 3510 TOPICS IN GERMAN STUDIES: SWITZERLAND. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Explores concepts and experience of the multicultural Swiss nation, focusing on its sociohistorical, economic, and political situation, and Switzerland's role in the future of Europe. *May be taken for credit toward a minor in German or most German major emphases.* (Prereq 1106 or the graduation proficiency test)

First 5 wk, Sec 50, MTh, 6:20-8:50, FolH 114, Zinggeler

Ger 3641 INTRODUCTION TO GERMAN FOLKLORE. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

The traditional folklore genres: charms (magic), legends, fairy tales, ballads. Not open for credit toward a major or minor in German. Requires no knowledge of German. (No prereq)

First 5 wk, Sec 50, MW, 6-8:30, FolH 214, 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, tuition*: \$274.

This course is designed to help students acquire a reading knowledge of basic German as rapidly as possible. No prior knowledge of German is required. Grammar is reduced to a minimum. The course progresses from intensive reading of simple, 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 50, MTh, 6-9:20, FolH 419, Taraba

Ger 0222 READING GERMAN. No credit, tuition*: \$274.

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 231 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 50, MTh, 6-9:20, FolH 312, Wakefield

History (Hist)

(614 Social Sciences: 624-2800)

College of Liberal Arts

Textbooks for most Hist courses are available at the Harold D. Smith Bookstore on the West Bank campus (625-3000)

Hyman Berman, Professor
Edward Farmer, Professor
George Green, Associate Professor
Byron K. Marshall, Professor
John Kim Munholland, Professor
Richard Rudolph, Professor
Stuart B. Schwartz, Professor
James D. Tracy, Professor
William E. Wright, Professor

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

Hist 1002 INTRODUCTION TO MODERN EUROPEAN HISTORY SINCE THE MIDDLE AGES. 4 credits, §1002H, 3002, tuition*: Resident \$274; Non-resident \$794.60. (IS)

Revolution, liberalism, and nationalism from 1715 to 1870. (No prereq. Meets concurrently with 3002)
Second 5 wk, Sec 50, TTh, 6-8:30, BlegH 155

Hist 1003 INTRODUCTION TO MODERN EUROPEAN HISTORY SINCE THE MIDDLE AGES. 4 credits, §1003H, 3003, tuition*: Resident \$274; Non-resident \$794.60. (IS)

1870 to recent times. (No prereq. Not open to jrs, srs. Meets concurrently with 3003)
First 5 wk, Sec 50, MW, 6-8:30, RarigC 616, Rudolph

Hist 1301 AMERICAN HISTORY. 4 credits, §1301H, tuition*: Resident \$274; Non-resident \$794.60. (IS)

Colonial era and early national period from the Revolution through Civil War and Reconstruction. (No prereq)
First 5 wk, Sec 50, TTh, 6-8:30, RarigC 610

Hist 1302 AMERICAN HISTORY. 5 credits, §1302H, tuition*: Resident \$342.50; Non-resident \$993.25. (IS)

Modern America from 1880 to the present. (No prereq)
Second 5 wk, Sec 50, MW, 6-8:30, BlegH 155, Green

Hist 1401 SURVEY OF LATIN AMERICAN HISTORY: COLONIAL PERIOD TO 1800. 4 credits, §3401, §LAS 3401, tuition*: Resident \$274; Non-resident \$794.60.

The Pre-Hispanic and colonial period to 1800 with emphasis on social, cultural, and economic aspects. (No prereq. Meets concurrently with 3401, LAS 3401)
First 5 wk, Sec 50, TTh, 6-8:30, BlegH 135

Hist 1432 HISTORY OF AFRICA: 1800 TO PRESENT. 4 credits, §3432, tuition*: Resident \$274; Non-resident \$794.60.

Colonial rule, the forced restructuring and underdevelopment of African economies, African resistance, nationalism, and the problems of independence. (No prereq. Meets concurrently with 3432)
First 5 wk, Sec 50, MW, 6-8:30, BlegH 250

Hist 1463 INTRODUCTION TO EAST ASIA IN MODERN TIMES. 4 credits, §3463, §EAS 1463, 3463 tuition*: Resident \$274; Non-resident \$794.60.

Decline of Asian empires; European and American imperialism; Asian responses; nationalism; social revolution, reintegration, modernization in China, Japan, Vietnam, Korea; retreat of European and American empires. (No prereq. Meets concurrently with 3463, EAS 1463)
First 5 wk, Sec 50, MW, 6-8:30, BlegH 155

Hist 3002 INTRODUCTION TO MODERN EUROPEAN HISTORY SINCE THE MIDDLE AGES. 4 credits, §1002, 1002H, tuition*: Resident \$284; Non-resident \$823.60.

See course description for Hist 1002. (No prereq. Meets concurrently with 1002)
Second 5 wk, Sec 50, TTh, 6-8:30, BlegH 155

Hist 3003 INTRODUCTION TO MODERN EUROPEAN HISTORY SINCE THE MIDDLE AGES. 4 credits, §1003, 1003H, tuition*: Resident \$284; Non-resident \$823.60.

1870 to recent times. (No prereq. Meets concurrently with 1003)
First 5 wk, Sec 50, MW, 6-8:30, RarigC 616, Rudolph

Hist 3401 SURVEY OF LATIN AMERICAN HISTORY: COLONIAL PERIOD TO 1800. 4 credits, §1401, §LAS 3401, tuition*: Resident \$284; Non-resident \$823.60.

See course description for Hist 1401. (No prereq. Meets concurrently with 1401, LAS 3401)
First 5 wk, Sec 50, TTh, 6-8:30, BlegH 135

Hist 3424 HISTORY OF MEXICO: PRE-COLUMBIAN PERIOD THROUGH INDEPENDENCE. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Indian cultures of Mexico before the conquest and subsequent contact between Europeans and Indians during the formation of Mexican society. (No prereq)
Second 5 wk, Sec 50, TTh, 6-8:30, BlegH 135, Schwartz

Hist 3432 HISTORY OF AFRICA: 1800 TO PRESENT. 4 credits, §1432, tuition*: Resident \$284; Non-resident \$823.60.

See course description for Hist 1432. (No prereq. Meets concurrently with 1432)
First 5 wk, Sec 50, MW, 6-8:30, BlegH 250

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Hist 3463 INTRODUCTION TO EAST ASIA IN MODERN TIMES. 4 credits, §1463, §EAS 1463, 3463, tuition*: Resident \$284; Non-resident \$823.60.

See course description for Hist 1463. (No prereq. Meets concurrently with 1463, EAS 1463)
First 5 wk, Sec 50, MW, 6-8:30, BlegH 155

Hist 3471 20th-CENTURY JAPAN. 4 credits, §EAS 3471, tuition*: Resident \$284; Non-resident \$823.60.

World War I and Japan's emergence as an industrial society and world power in the 1920s; rise of militarism, World War II in the Pacific; political reform, economic resurgence, and cultural change in the postwar era. (No prereq. Meets concurrently with EAS 3471)

Second 5 wk, Sec 50, TTh, 6-8:30, BlegH 250, Marshall

Hist 3625 FRANCE IN THE AGE OF ENLIGHTENMENT. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

The writings of several leading thinkers of the enlightenment, including Montesquieu, Voltaire, and Rousseau, examined in the context of 18th-century French history. (No prereq)

Second 5 wk, Sec 50, MW, 6-8:30, BlegH 10, Tracy

Hist 3722 EUROPE IN THE ERA OF WORLD WAR II. 4 credits, §3224, tuition*: Resident \$284; Non-resident \$823.60.

Rise of fascism and totalitarian movements in Europe; political and military origins of World War II; course of the war and its impact on European society. (No prereq)

First 5 wk, Sec 50, TTh, 6-8:30, BlegH 125, Munholland

Hist 3822 UNITED STATES IN THE 20TH CENTURY: 1932-1960. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

The Great Depression and the New Deal; the challenge of fascism and the coming of World War II; the origins of the Cold War; the great Red Scare; the politics and culture of the Eisenhower era; the origins of the civil rights movement. (No prereq)

First 5 wk, Sec 50, MW, 6-8:30, BlegH 10, Berman

Humanities (Hum)

(355 Ford Hall: 625-6563)
College of Liberal Arts

Textbooks for most Hum courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Ronald Akehurst, Professor
Dianne Johnson, Teaching Assistant
George Klinger, Assistant Professor
James Tracy, Professor

Hum 1001 HUMANITIES IN THE MODERN WEST I. 4 credits, §3001, §Rhet 1301, tuition*: Resident \$274; Non-resident \$794.60. (IS)

Eighteenth-century Europe. Old Regime through French Revolution and Napoleon; new science, Enlightenment, cult of sensibility; rococo, neoclassicism, incipient romanticism. Integrative study of works by creative figures such as Pope, Voltaire, Rousseau, Diderot, Goethe, Watteau, Boucher, Hogarth, David, Goya, Mozart, Haydn. (No prereq. Meets concurrently with Hum 3001)

Second 5 wk, Sec 50, MW, 6-8:30, BlegH 115, Tracy

Hum 1113 EUROPEAN HERITAGE: ROME. 4 credits, §3113, §Rhet 3322, tuition*: Resident \$274; Non-resident \$794.60. (IS)

Roman civilization of the late republic and empire; rise of Christianity. Literature, religion, philosophy, art, architecture. Integrative study of selected works influential in modern Western culture, Caesar, Lucretius, Virgil, Ovid, Seneca, Petronius, Augustine, Boethius. (No prereq. Meets concurrently with Hum 3113)

First 5 wk, Sec 50, TTh, 6-8:30, FordH 155, Johnson

Hum 1115 EUROPEAN HERITAGE: MIDDLE AGES. 4 credits, §3115, §Rhet 3322, tuition*: Resident \$274; Non-resident \$794.60. (IS)

Sixth to 14th centuries: growth of Christendom; monasticism; feudalism and courtly love; rise of towns and universities. Art and architecture: Byzantine, Romanesque, and Gothic. Music: Gregorian chant, minstrelsy, liturgical drama. Literature: epic, romance; Dante. Islam. Scholastic philosophy: Abelard, Aquinas. (No prereq. Meets concurrently with Hum 3115)

Second 5 wk, Sec 50, MW, 6-8:30, FolH 340, Akehurst

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

Hum 3001 HUMANITIES IN THE MODERN WEST I. 4 credits, §1001, §Rhet 1301, tuition*: Resident \$284; Non-resident \$823.60. (IS)

See course description for Hum 1001. (Prereq jr or sr or #. Meets concurrently with Hum 1001)

Second 5 wk, Sec 50, MW, 6-8:30, BlegH 115, Tracy

Hum 3113 EUROPEAN HERITAGE: ROME. 4 credits, §1113, §Rhet 3322, tuition*: Resident \$284; Non-resident \$823.60. (IS)

See course description for Hum 1113. (Prereq jr or sr or #. Meets concurrently with Hum 1113)

First 5 wk, Sec 50, TTh, 6-8:30, FordH 155, Johnson

Hum 3115 EUROPEAN HERITAGE: MIDDLE AGES. 4 credits, §1115, §Rhet 3322, tuition*: Resident \$284; Non-resident \$823.60. (IS)

See course description for Hum 1115. (Prereq jr or sr or #. Meets concurrently with Hum 1115)

Second 5 wk, Sec 50, MW, 6-8:30, FolH 340, Akehurst

Hum 3677 SELF-REALIZATION IN 20TH-CENTURY LITERATURE. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Quest for meaning and process of individuation. Works by Conrad, Kate, Chopin, Joyce, Sartre, Hesse. (Prereq jr or sr or #)

First 5 wk, Sec 50, TTh, 6-8:30, FordH 55, Klinger

Industrial Engineering/ Operations Research (IEOR)

(125 Mechanical Engineering: 625-0705)

Institute of Technology

Textbooks for most IEOR courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Edward Barnett, Lecturer

Kevin J. Dooley, Associate Professor

IEOR 3000 (formerly IEOR 5000) INTRODUCTION TO INDUSTRIAL ENGINEERING ANALYSIS. 4 credits, § IEOR 5000, tuition*: Resident \$308; Non-resident \$893.20.

Scientific management, mathematical models, methods engineering, work measurement, worker satisfaction and participation, wage payment plans, break-even analysis, incremental costs, the time value of money and 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 50, MW, 6-9, MechE 212, Barnett

IEOR 5030 QUALITY CONTROL AND RELIABILITY. 4 credits, tuition*: Resident \$308; Non-resident \$893.20; Resident Graduate credit \$640; Non-resident Graduate credit \$1280.

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 by IEOR graduate students)

Second 5 wk, Sec 50, MW, 5-8, EE/CSci 3111, Dooley

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Industrial Relations (IR)

(537 Management/Economics: 624-2500)
Carlson School of Management

Textbooks for most IR courses are available at the Harold D. Smith Bookstore on the West Bank campus (625-3000)

IR 3002 PERSONNEL AND INDUSTRIAL RELATIONS. 4 credits, \$8002, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20. (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 1101, Econ 1102, Psy 1001; and at least 90 cr completed or in progress. Limited to 65) First 5 wk, ★Sec 50, MW, 6-9, BlegH 125

IR 3010 THE INDIVIDUAL IN THE ORGANIZATION. 4 credits, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20.

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 50, MW, 6-9, BlegH 120

Information and Decision Sciences (IDSc)

(395 Humphrey Center: 624-8030)
Carlson School of Management

Textbooks for most IDSc courses are available at the Harold D. Smith Bookstore on the West Bank campus (625-3000)

Courses in the IDSc area make up a program designed for students with a variety of backgrounds:

1. Undergraduates in the Carlson School or other schools who want one or more IDSc courses as electives.

2. Working students who want IDSc electives or an information technology-focused emphasis program as part of their mid-career education, but who are not necessarily working toward a degree.

3. Undergraduate Carlson School business majors who want to focus on information technology in a self-designed emphasis program as part of their Carlson School B.S.B. degree.

Starting Points

Students who have been accepted into, or who plan to apply to the Carlson School, should begin with the Core Courses of IDSc 1010, 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, tuition* (includes \$16 special fee): Resident \$290; Non-resident \$810.60. (IS)

Meeting information needs of managers. Sources of data, data collection methods, data organization and presentation. Descriptive statistical analysis methods. Lab instruction to provide intermediate skill development in word processing and spreadsheet analysis on personal computers. *Students are expected to have a basic understanding of word processing (WordPerfect) and spreadsheet analysis (Lotus) before registering for this course. In addition to tuition and special fees, students are required to purchase a computer access card. Registered students may purchase this card at any Bursar's Office; the West Bank Bursar's Office is in Anderson Hall (8 a.m.-3:30 p.m.), telephone 625-1383. The fee also may be paid at the Extension Classes Cashier's Office in 138 Westbrook Hall. That office is open until 8 p.m. most evenings Monday through Thursday early each quarter. When the office is not open in the evening, cards are available at the Information Desk in 101 Westbrook Hall. Limits are strictly enforced due to facility limitations. No permission to register will be given when a section closes.* (Prereq 30 credits, pre-management student, Math 1111 or ¶1111. Limited to 45)

Ten wk, ★Sec 50, T, Lect, 5:30-8:15, BlegH 130
 Th, Lab, 5:30-6:30, BlegH 90

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

OMS 1020 DATA ANALYSIS AND STATISTICAL INFERENCE FOR MANAGERS. See page 75.

IDSc 3030 (formerly MSci 3030) INFORMATION SYSTEMS AND INFORMATION MANAGEMENT. 4 credits, \$MSci 3030, \$IDSc 3002, \$MIS 3100, 5100, 3101, 3300, 5101, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20.

Defining information requirements. Developing information systems applications. Using information systems. Defining data structures and building and using databases. Formulating database retrievals. Building and using models and expert systems to support decision making. Obtaining external data to support model building and decision making. Evaluating information. Skill development in database software. This course is equivalent to MIS 3100, 5100, 3101, 3300, and 5101. *Limits are strictly enforced due to facility limitations. No permission to register will be given when a section closes.* (Prereq IDSc 1010 and OMS 1020. Limited to 30)

Ten wk, ★Sec 50, Th, Lect, 5:30-8, BlegH 130
Th, Lab, 8-9, HHHctr 35

NOTE: Students taking upper division Carlson School courses through CEE should have the equivalent of 90 quarter college credits with a "B-" grade average.

Institute of Languages and Literatures

(105 Folwell: 624-0007 or 624-3331)
College of Liberal Arts

Textbooks for most courses offered through the Institute on the East Bank campus are available at the Minnesota Book Center in Williamson Hall (625-6000); courses offered on the West Bank campus are at the Harold D. Smith Bookstore on the West Bank campus (625-3000) the Health Sciences Bookstore (625-8600); and those offered on the St. Paul campus are at Books Underground on the St. Paul campus (624-9200)

Zhang Wenying, Teaching Assistant

East Asian Languages and Literatures

Chn 3161 CHINESE POETRY IN ENGLISH TRANSLATION. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Major poets examined in context of their intellectual, social, and aesthetic traditions. Knowledge of Chinese not required. (No prereq) First 5 wk, Sec 50, TTh, 6:20-8:50, FolH 148, Zhang

Linguistics (Ling)

Ling 3001 INTRODUCTION TO LINGUISTICS. 5 credits, \$3005, 5001, tuition*: Resident \$355; Non-resident \$1029.50.

Systematic survey of phonetics, phonology, morphology, syntax, semantics, and historical-comparative linguistics; language learning and psychology of language; linguistic universals; language in society. (No prereq. Meets concurrently with 5001)

Ten wk, Sec 50, W, 6:20-9:35, BlegH 330

Ling 5001 INTRODUCTION TO LINGUISTICS. 5 credits, \$3001, 3005, tuition*: Resident \$355; Non-resident \$1029.50; Resident Graduate credit \$800; Non-resident Graduate credit \$1600.

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 50, W, 6:20-9:35, BlegH 330

Ling 5801 INTRODUCTION TO LANGUAGE LEARNING. 4 undergraduate credits, \$3001, 3005, tuition*: Resident \$284; Non-resident \$823.60. 5 graduate credits; Resident Graduate credit \$640; Non-resident Graduate credit \$1280.

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 50, T, 6:20-8:50, CivMinE 213

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Insurance and Risk Management (Ins)

(537 Management/Economics: 624-2500)
Carlson School of Management

(See also Finance)

No courses offered summer 1993

Interdepartmental Study (ID)

(225 Johnston Hall: 624-5701)
College of Liberal Arts

Textbooks for most ID courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

No courses offered summer 1993

International Relations (IntR)

(248 Social Sciences: 624-9353)
College of Liberal Arts

No courses offered summer 1993

Jewish Studies (JwSt)

(331 Folwell Hall: 625-5353)
 Classical and Near Eastern Studies
College of Liberal Arts

Textbooks for most JwSt courses are available at the Minnesota Book Center in Williamson Hall (625-6000).

Roger Brooks, Visiting Professor of Jewish Studies

JwSt 3521 THE HOLOCAUST. 4 credits, §ReIS 3541, tuition* (includes \$4 course fee): Resident \$288; Non-resident \$827.60.

Nazi destruction of Jewish life in Europe, 1933-45. Historical, social background of European Jewish communities. Anti-Semitism and Nazism. Ghettos under Nazi rule; social and cultural organization, government. Nazi terror and destruction; Jewish resistance; historical consequences. (No prereq. Meets concurrently with ReIS 3541)

First 5 wk, Sec 50, TTh, 6:20-8:50, FolH 104, Brooks

Journalism and Mass Communication (Jour)

(111 Murphy Hall: 625-9824)
College of Liberal Arts

Textbooks for most Jour courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Jour 1001 INTRODUCTION TO MASS COMMUNICATION. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

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. Limited to 72)

Second 5 wk, ★Sec 50, TTh, 6:20-8:50, MurH 308

Landscape Architecture (LA)

(205 North Hall: 625-8285)
College of Architecture and Landscape Architecture

(See also ...*Etcetera* in The Practical Scholar non-credit section)

Textbooks for LA courses on the Minneapolis campus are available at the Minnesota Book Center in Williamson Hall (625-6000); books for courses on the St. Paul campus are available at Books Underground on the St. Paul campus (624-9200)

LA 5119 PLANTING DESIGN: ECOLOGICAL PRINCIPLES/LAND USE CONCEPTS AND IMPLEMENTATION. 4 credits, tuition*: Resident \$308; Non-resident \$893.20.

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 50, MWF, 5-9, Arch 10

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

Latin

See page 44.

Latin American Studies

See Area Studies Programs, page 39.

Learning and Academic Skills (LAsK)

(104 Eddy Hall: 624-3323)
College of Liberal Arts

Textbooks for most LAsK courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Susan A. Aase, Associate Education Specialist
Joyce Weinsheimer, Program Director

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.) Tuition* (includes \$30 special fee): Resident \$167; Non-resident \$427.30.

Practical assistance to the student in developing efficient study habits, organizing materials, preparing for examinations, and improving the speed and comprehension of reading. Diagnosis and practice in basic skill areas such as reading, spelling, vocabulary, and elementary composition also are provided through individualized learning projects. (No prereq. Limited to 30)

Ten wk, ★Sec 50, M, 6-8:30, WullH 130
Second 5 wk, ★Sec 51, TTh, 6-8:30, WullH 130,
Weinsheimer

LAsK 1303 INTERNSHIP EXPERIENCE FOR DISABLED STUDENTS. 2 credits. (Credits do not count toward a B.A. degree.) Tuition*: Resident \$137; Non-resident \$397.30.

Gain work experience through a paid or volunteer internship. (Prereq 1302. Limited to 20)

Ten wk, ★Sec 50, W, 4:30-6:30, KoltH S137, Aase

Linguistics

See Institute of Languages and Literatures, page 68.

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 (Mgmt)

(835 Management/Economics: 624-5232)
Carlson School of Management

Textbooks for most Mgmt courses are available at the Harold D. Smith Bookstore on the West Bank campus (625-3000)

Mgmt 3001 FUNDAMENTALS OF MANAGEMENT. 4 credits, \$8001, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20. (IS)

Leadership and management functions such as those required to establish goals, policies, procedures, and plans are studied. Motivation, planning, and control systems, and concepts of organizational structure and behavior are also reviewed. **May not be taken S-N.** (Prereq at least 90 cr completed or in progress)

First 5 wk, Sec 50, TTh, 6-8:45, AndH 230

Second 5 wk, Sec 50, MW, 6-8:45, AndH 370

Mgmt 3002 PSYCHOLOGY IN MANAGEMENT. 4 credits, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20. (IS)

Centers on development and application of behavior principles, methods, and skills which underlie managerial competence in preventing and solving problems within and between individuals and groups and aid in effective utilization of human resources. Various laboratory procedures are used to highlight concepts, methods and skills and furnish practice in applying them to management problems. **May not be taken S-N.** (Prereq at least 90 cr completed or in progress. Limited to 36)

First 5 wk, ★Sec 50, MW, 6-8:45, BlegH 205

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Mgmt 3004 BUSINESS POLICY: STRATEGY FORMULATION AND IMPLEMENTATION. 5 credits, tuition* (includes \$16 special fee): Resident \$401; Non-resident \$1132.50. (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 occasionally presentations to be made to the entire class. Concepts and approaches to strategic planning are taught in this course. These concepts as well as concepts, tools and theories previously presented in other courses are applied to solve goal selection and strategy implementation problems. Usually the viewpoint of the general line manager (department, division, or executive level) is taken. **May not be taken S-N.** (Prereq sr and completion of business core courses or ¶ final core course. Limited to 30)

First 5 wk, ★Sec 50, TTh, 5:30-9, HHCtr 30

Marketing (Mktg)

(1235 Management/Economics: 624-5055)
Carlson School of Management

Textbooks for most Mktg courses are available at the Harold D. Smith Bookstore on the West Bank campus (625-3000)

Mktg 3000 PRINCIPLES OF MARKETING. 4 credits, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20. (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 1101 or #, and at least 90 cr completed or in progress. **May not be taken S-N.** Limited to 250)

Second 5 wk, ★Sec 50, MW, 5:30-8:30, BlegH 5

Mktg 3010 BUYER BEHAVIOR AND MARKETING ANALYSIS. 4 credits, \$3098, 3095, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20.

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, OMS 1020 or equivalent, and at least 90 cr completed or in progress. Limited to 40)

Ten wk, ★Sec 50, T, 5:30-8:30, BlegH 205

Mathematics (Math)

(127 Vincent Hall: 625-8883)
Institute of Technology

Textbooks for most Math courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

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 Carlson School of Management for benefit of prebusiness 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.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

Students interested in noncredit introductory mathematics courses should see the General College and Practical Scholar sections of this bulletin.

Math 1111 COLLEGE ALGEBRA AND ANALYTIC GEOMETRY. 5 credits, §1201, tuition*: Resident \$342.50; Non-resident \$993.25. (IS)

Functions and graphs, quadratic equations, progressions, inequalities, complex numbers, theory of equations, permutations and combinations, probability, systems of equations, determinants, graphing of linear and quadratic equations, conics in standard position, logarithms. **May be used to replace 1031.** (Prereq plane geometry, 2 years high school algebra and mathematics placement score or plane geometry and GC 0631. See Mathematics prerequisites page 71. Limited to 35)

Ten wk, ★Sec 50, MW, 6-8:05, AmundH 124

Ten wk, ★Sec 51, TTh, 6-8:05, KoltH S136

Math 1142 SHORT CALCULUS. 5 credits, §1211, tuition*: Resident \$342.50; Non-resident \$993.25. (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 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 71. Limited to 35)

Ten wk, ★Sec 50, TTh, 6-8:05, KoltH S132

Math 1201 PRE-CALCULUS. 5 credits, 1008, 1111, tuition*: Resident \$342.50; Non-resident \$993.25. (IS)

Inequalities, analytical geometry, complex numbers, binomial theorem, mathematical induction, functions and graphs, and trigonometric, exponential and logarithmic functions. **May be used to replace 1151.** (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 71. Limited to 35)

Ten wk, ★Sec 50, MW, 6-8:05, KoltH S138

Math 1211 CALCULUS I. 5 credits, §1142, 1311, 1611, tuition*: Resident \$342.50; Non-resident \$993.25. (IS)

Analytic geometry and calculus of functions of one variable, applications. **May be used to replace 1251.** (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 71. Limited to 35)

Ten wk, ★Sec 50, MW, 6-8:05, KoltH S139

Ten wk, ★Sec 51, TTh, 6-8:05, VinH 16

Math 1221 CALCULUS II. 5 credits, §1321, 1421, tuition*: Resident \$ 342.50; Non-resident \$993.25. (IS)

A continuation of the course described under 1211.

May be used to replace 1252. (Prereq grade of C or better in 1211. Limited to 35)

Ten wk, ★Sec 50, MW, 6-8:05, VinH 16

Math 5090 CALCULUS REFRESHER. 5 credits, tuition*: Resident \$385; Non-resident \$1116.50; Resident Graduate credit \$800; Non-resident Graduate credit \$1600.

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 50, MW, 6-8:05, KoltH S136

Mechanical Engineering (ME)

(125 Mechanical Engineering: 625-0705)

Institute of Technology

Textbooks for most ME courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Tesfahun Berhe, Lecturer

Kumar K. Tamma, Associate Professor

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

ME 1025 ENGINEERING GRAPHICS. 4 credits, SEG 1025, tuition*: Resident \$274; Non-resident \$794.60. (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. Textbooks and supplies for this course cost approximately \$100. (Prereq ¶Math 1211 or equivalent)

Ten wk, Sec 50, T, 6-9:30, Arch 10, Berhe

ME 3020 MECHANICAL ENGINEERING COMPUTATION. 4 credits, tuition*: Resident \$308; Non-resident \$893.20.

Application of numerical methods and FORTRAN programming to the solution of mechanical engineering problems. Engineering programming style. Methods for solving linear and non-linear engineering equations. Interpolating and displaying engineering data. Simulating mechanical systems. Thermal analysis using finite difference techniques. (Prereq IT student, Math 3321 or equivalent, CSci 3101. Limited to 50)

First 5 wk, ★Sec 50, WF, 5-8, Arch 55, Tamma

ME 5254 DESIGN MORPHOLOGY WITH APPLICATIONS. 4 credits, tuition*: Resident \$308; Non-resident \$893.20.

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 50, MW, 6-9, CivMinE 213

Middle Eastern Studies

See Area Studies Programs, page 39, and Institute of Languages and Literatures, page 68.

Music (Mus)

(100 Ferguson Hall: 624-5740)

College of Liberal Arts

(See also REX 0608, Adventures in Voice Education and REX 0803, CitySongs: A Twin Cities Demonstration Project in Music)

Textbooks for most Mus courses are available at the Harold D. Smith Bookstore on the West Bank campus (625-3000)

John E. Anderson, Professor
Michael Cherlin, Associate Professor
David Damschroder, Associate Professor
Daniel Freeman, Instructor
Babette Lightner, Lecturer
Clifton Ware, Associate Professor

Mus 1001 FUNDAMENTALS OF MUSIC. 4 credits, tuition*: Resident \$274; Non-resident \$397.30.

Investigation of music notation and fundamental concepts underlying musical structure. Intervals, clefs, chords, scales, cadences, harmonic analysis, rhythm and meter. Emphasis on active participation: playing the piano, singing, clapping rhythms, aural perception. Weekly laboratory assignments in vocal and piano performance. (No prereq)

First 5 wk, Sec 50, MTh, 6:15-9:25, FergH 225, Anderson

Second 5 wk, Sec 51, MTh, 6:15-9:25, FergH 225, Damschroder

Mus 1021 INTRODUCTION TO MUSIC. 5 credits, 3021, tuition*: Resident \$342.50; Non-resident \$993.25.

Music in the repertory of our culture—forms and styles 17th-20th century. Aural analyses, relationships of large units of musical form. (No prereq)

First 5 wk, Sec 50, W, 6-10, FergH 149, Freeman

Mus 1051-1052 PIANO CLASS FOR NON-MUSIC MAJORS. 2 credits, tuition*: Resident \$137; Non-resident \$397.30.

Designed primarily for the person with no piano background. Basic keyboard skills of sightreading, harmonization, transposition, and improvisation for non-music majors. (No prereq for 1051; 1051 for 1052. Limited to 16)

Ten wk, 1051, ★Sec 50, T, 6:15-8:15, FergH 259 (Limit 32)

Ten wk, 1051, ★Sec 51, T, 6:15-8:15, FergH 265

Ten wk, 1052, ★Sec 52, W, 6:15-8:15, FergH 265

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

Mus 1160 VOICE: CLASS LESSONS. 2 credit (6 cr max), tuition*: Resident \$137; Non-resident \$397.30.

Fundamentals of vocal production—posture, respiration, phonation, articulation. (No prereq) First 5 wk, Sec 50, MTh, 6:15-8:15, FergH 90, Ware

Mus 1512 EAR-TRAINING AND SIGHT-SINGING II. 1 credit, tuition*: Resident \$68.50; Non-resident \$198.65.

Melodic, harmonic, and rhythmic dictation; sight-singing; clef-reading; musicianship drill. (Prereq 1511, ¶1532)

Ten wk, Sec 50, MTh, 6:15-7:15, FergH 149

Mus 1532 THEORY II: DIATONIC TONALITY. 3 credits, tuition*: Resident \$205.50; Non-resident \$595.95.

Writing and analysis of basic diatonic tonal structures. Basic harmonic and contrapuntal relationships. (Prereq 1531, 1152 or 1522 or equivalent, ¶1512)

Ten wk, Sec 50, MTh, 7:15-9, FergH 149

Mus 5150 BODY AWARENESS IN ACTIVITY: THE ALEXANDER TECHNIQUE FOR MUSICIANS. 2 credits, tuition*: Resident \$142; Non-resident \$411.80; Resident Graduate credit \$320; Non-resident Graduate credit \$640.

Introduction to the Alexander Technique with specific applications to music performance. Emphasis on body/mind awareness to promote technical ease and freedom. May be repeated for credit. (Prereq music major or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 12)

First 5 wk, ★Sec 50, T, 6-9, FergH 105, Lightner

Summer Opportunity

Through Professional Development and Conference Services

Sacred Choral Music Summer Workshop, August 9-14

Workshop with Philip Brunelle, nationally known conductor. Telephone 625-5813 for information and to register. Explores music for chorus and solo voice. Includes guest conductors. 2 graduate credits (Mus 5260)

Natural Resources and Environmental Studies (NRES)

(439 Borlaug Hall: 625-7747)

Colleges of Agriculture and Natural Resources

(See also *Natural and Physical Sciences* in The Compleat Scholar noncredit section)

Textbooks for most NRES courses are available at Books Underground on the St. Paul campus (624-9200)

Terence H. Cooper, Associate Professor

NRES 5100 PROBLEM SOLVING IN NATURAL RESOURCES AND ENVIRONMENTAL STUDIES. 5 credits, tuition*: Resident \$402.50; Non-resident \$1167.25.

Students identify and analyze natural resource and environmental problems. Development of a solution to the problem. Discussions reflect diverse aspects of the problem and assignments. Oral and written presentations. Students participate as a team. (No prereq. May not be taken for graduate credit at the University of Minnesota. Limited to 20)

Spec Term, ★Sec 50, TTh, June 15, 17, 1-5; TTh, June 22, 24, 29, July 6, 8, 13, 15, 20, 22, 27, 29, Aug 3, 5, 10, 12, 17, 19, 24, 3-5; BorH 375, StP Campus, Cooper

Operations and Management Science (OMS)

(332 Management/Economics: 624-7010)

Carlson School of Management

Textbooks for most OMS courses are available at the Harold D. Smith Bookstore on the West Bank campus (625-3000)

John B. Knauff, Adjunct Professor, Knauff & Associates, Inc.

School of Management degree students must take Operations and Management Science courses A-F.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

OMS 1020 (formerly MSci 1020) DATA ANALYSIS AND STATISTICAL INFERENCE FOR MANAGERS. 4 credits, §MSci 1020, tuition* (includes \$16 special fee): Resident \$290; Non-resident \$810.60. (IS)

Introduction to probabilistic and statistical techniques for decision making, including data analysis, sampling, estimation, and hypothesis testing and regression. Using computer software and computer-stored data in statistical analysis. Introduction to modeling and linear programming. (Prereq MSci 1010 or IDSc 1010, pre-management student, Math 1111; Math 1131 recommended. Limited to 45)

Ten wk, ★Sec 50, W, 5:30-8:50, BlegH 235

OMS 3000 (formerly OM 3000) INTRODUCTION TO OPERATIONS MANAGEMENT. 4 credits, §OM 3000, tuition* (includes \$16 special fee): Resident \$324; Non-resident \$909.20.

Concepts and principles related to the management of operations functions, including operations strategy, forecasting, process design, Just-In-Time, inventory management, principles of scheduling, and quality improvement. Taught from a managerial perspective, this course uses examples from service industries, nonprofit organizations, and manufacturing, and stresses the relationships between operations and the environment. (Prereq at least 90 credits completed or in progress. Open to nondegree students with equivalent experience. Limited to 50)

Ten wk, ★Sec 50, Th, 5:30-8:50, BlegH 140, Knauff

Philosophy (Phil)

(355 Ford Hall: 625-6563)

College of Liberal Arts

Textbooks for most Phil courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Jasper Hopkins, Professor
Douglas Lewis, Associate Professor
C. Wade Savage, Professor

Phil 1001 LOGIC. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25. (IS)

Application of formal techniques for evaluating arguments. (No prereq)

First 5 wk, Sec 50, TTh, 6:20-8:50, FordH 115, Lewis

Second 5 wk, Sec 51, TTh, 6:20-8:50, FordH 285, Savage

Phil 1002 INTRODUCTION TO PHILOSOPHY. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25. (IS)

Problems, principal methods and schools of philosophy; historical and contemporary views. (No prereq)

Second 5 wk, Sec 50, TTh, 6:20-8:50, FordH 175, Lewis

Phil 1003 INTRODUCTION TO ETHICS. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25.

Problems that arise when human beings attempt to think systematically about conduct and value. (No prereq)

First 5 wk, Sec 50, TTh, 6:20-8:50, FordH 285, Hopkins

Physical Education (PE)

(224 Cooke Hall: 625-1007)

College of Education

(See also PSch 0930, Building a Leisure Identity: Personal Growth Through Play and PSch 0935, Racewalking: An Introduction to Wellness)

Textbooks for most PE courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Linda Stoen, Teaching Specialist

PE 3330 DANCE TOPICS: TEACHING AEROBICS. 2 credits, tuition* (includes \$7 special fee): Resident \$161; Non-resident \$453.60.

Develop a core knowledge and practical skills for teaching dance exercise and basic knowledge of human anatomy, kinesiology, and physiology. (Prereq 1003 or 1006. Meets concurrently with Dnce 3330. Limited to 16)

First 5 wk, ★Sec 50, TTh, 5:30-7, PeikH 65, Stoen

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

Physics (Phys)

(148 Physics: 624-7375)
Institute of Technology

Textbooks for most Phys courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Robert Cassola, Lecturer

Phys 1254 GENERAL PHYSICS IV. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

Continuation of the General Physics 1251, 1252, 1253 series. *1254*: Thermal and statistical physics and the atomic structure of matter. (Prereq Phys 1253. Limited to 100)

Ten wk, ★Sec 50, T, 6-7:50, Phys 170; Th, 6-7:50, Phys 170, Cassola

Plant Biology (PBio)

(220 Biological Sciences: 625-1234)
College of Biological Sciences

(See also *Natural and Physical Sciences and ...Etcetera* in *The Compleat and Practical Scholar* non-credit sections; and REX 0130, Stress Effects on Living Plant Cells)

Textbooks for most PBio courses are available at Books Underground on the St. Paul campus (624-9200)

PBio 1009 MINNESOTA PLANT LIFE. 4 credits, tuition* plus \$20 special fee. *Offered alternate years. Tentatively scheduled for summer 1994.*

PBio 5960 PLANT BIOLOGY WORKSHOP DESIGNED FOR ELEMENTARY TEACHERS. 3 credits, tuition*: Resident \$241.50; Non-resident \$700.35; Resident Graduate credit \$480; Non-resident Graduate credit \$960.

A two-week workshop to help teachers learn how plants can be used in their classrooms (two previous workshops were well received by elementary teacher participants). Participants learn how to easily obtain and grow plants and integrate them into a variety of classroom activities. Introduction to Bottle Biology, Wisconsin Fast Plants, and GrowLab. Background information in plant biology and a chance to learn about current research in plant biology from University faculty who have a strong interest in setting up a network between the University and K-12 educators. Teachers have time to select, adapt, and create curricular material for their own classrooms. **Must be taken S-N.**

Instructors are Tom Soulen, Associate Professor in Plant Biology; Sandy Tanck of the Minnesota Landscape Arboretum; Jane Phillips, Coordinator of Instructional Labs in the College of Biological Sciences; and Kathy Ball, Associate Education Specialist for the College of Biological Sciences. A stipend for participation is pending funding. Registration of pairs of teachers from one school is given preference. Call Extension Classes at 625-3898 for further information and registration materials. (No prereq. Inquire about graduate credit at the time of registration. Limited to 20)

Spec Term, ★Sec 50, July 26-Aug. 6, 1993 plus three to four additional follow-up meetings to be arranged during the 1993-94 academic year at participants' convenience.

Political Science (Pol)

(1414 Social Sciences: 624-4144)
College of Liberal Arts

Textbooks for most Pol courses are available at the Harold D. Smith Bookstore on the West Bank campus (625-3000)

Raymond Duvall, Professor
Edwin Fogelman, Professor
Virginia Gray, Professor
Karilyn K. Jons, Teaching Assistant
Sandra Johnstone, Teaching Assistant
Mark Laffey, Teaching Assistant
Himadeep R. Muppidi, Teaching Assistant
Ido Oren, Assistant Professor
W. Phillips Shively, Professor
John L. Sullivan, Professor

Pol 1001 AMERICAN GOVERNMENT AND POLITICS. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25. (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 50, MW, 6-9:15, AndH 230, Gray

Pol 1025 WORLD POLITICS. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

Contemporary international relations; forms of state interaction; problems of conflict and cooperation. (No prereq)

Second 5 wk, Sec 50, MW, 6-8:30, BlegH 125, Laffey

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Pol 1041 CONTEMPORARY POLITICAL IDEOLOGIES. 4 credits, tuition*: Resident \$274; Non-resident \$794.60. (IS)

Major modern ideologies such as liberalism, democracy, conservatism, socialism, communism, fascism, nationalism, imperialism, racism. Adequacy of alternative ideologies for analysis and solution of political and social problems. (No prereq)

First 5 wk, Sec 50, TTh, 6-8:30, BlegH 420, Fogelman

Pol 3051 INTRODUCTION TO POLITICAL ANALYSIS. 5 credits, tuition*: Resident \$355; Non-resident \$1029.50.

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)

Second 5 wk, Sec 50, TTh, 6-9:15, BlegH 255, Jons

Pol 3309 JUDICIAL PROCESS. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Structure of American judiciary; selection of judges; process of litigation; influences on judicial decisions; impact of and compliance with decisions; role of Supreme Court in American political system. (Prereq 1001 or equivalent or #)

First 5 wk, Sec 50, TTh, 6-8:30, BlegH 120, Johnstone

Pol 3323 CIVIL LIBERTIES IN AMERICA. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Political importance of civil liberties in American society. Tolerance as a social phenomenon; issues such as free speech, religion, media control, and effects of campaigning. (Prereq 1001 or equivalent or #)

Second 5 wk, Sec 50, MW, 6-8:30, BlegH 145, Sullivan

Pol 3835 INTERNATIONAL SYSTEM. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Structure of international system; balance of power, bipolar and other international systems; theories of stability. Change, conflict, and cooperation. (No prereq)

First 5 wk, Sec 50, MW, 6-8:30, BlegH 115, Duvall

Pol 3836 FOREIGN POLICY DECISIONMAKING. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Theories and examples of foreign policy decision making processes, including policy formulation and implementation. Examples drawn from various foreign policy issues. (No prereq)

Second 5 wk, Sec 50, TTh, 6-8:30, BlegH 260, Muppidi

Pol 5461 WESTERN EUROPEAN GOVERNMENT AND POLITICS. 5 credits, tuition*: Resident \$355; Non-resident \$1029.50; Resident Graduate credit \$800; Non-resident Graduate credit \$1600.

Political institutions in their social settings; power and responsibility; governmental stability; political decision making, government and economic order. (Prereq 3051 or nonpolitical science grad or #. Qualified students may register for graduate credit at the University of Minnesota)

First 5 wk, Sec 50, MW, 6-9:15, BlegH 260, Shively

Pol 5885 INTERNATIONAL PEACE AND VIOLENCE. 4 credits, tuition*: Resident \$284; Non-resident \$823.60; Resident Graduate credit \$640; Non-resident Graduate credit \$1280.

Normative issues surrounding international violence; causes of violence and possible mechanisms for creating international peace; alternative structures for limiting future violence and maintaining peace. (Prereq 3835 or nonpolitical science grad or #. Qualified students may register for graduate credit at the University of Minnesota)

Second 5 wk, Sec 50, TTh, 6-8:30, BlegH 420, Oran

Portuguese

See page 84.

Psychology (Psy)

(N218 Elliott Hall: 625-4042)

College of Liberal Arts

Textbooks for most Psy courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Paul Chapman, Assistant Professor
John H. Fleming, Assistant Professor
Jerome Kroll, Adjunct Associate Professor

(See also *Human Development* courses in The Practical Scholar noncredit section)

* Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

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

Psy 1001 INTRODUCTION TO PSYCHOLOGY. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25. (IS)

Introduction to study of human behavior. Prerequisite for all advanced courses in psychology. (No prereq)

Ten wk, Sec 50, MW, 6:20-8:30, AndH 270

Ten wk, Sec 51, TTh, 9-11 a. m, MacP Annex 1.
Offered through Continuing Education for Women.

Psy 1004-1005+ INTRODUCTORY LABORATORY PSYCHOLOGY. 4 credits each offering, tuition* each offering: Resident \$274; Non-resident \$794.60.

Experiments illustrating contemporary subject matter such as human and animal learning, problem solving, visual perception, measurement of general and special abilities and personality traits. (Prereq 1001 or ¶1001 for 1004; 1004 for 1005. Limited to 24)

First 5 wk 1004, ★Sec 50, TTh, 6:20-8:50, EltH 150-160

Second 5 wk 1005, ★Sec 51, TTh, 6:20-8:50, EltH 150-160

Psy 3061 INTRODUCTION TO PHYSIOLOGICAL PSYCHOLOGY. 4 credits, \$5061, tuition*: Resident \$284; Non-resident \$823.60.

Neural mechanisms of motivation, emotion, sleep-wakefulness cycle, learning, and communication in animals and humans. (Prereq 1005 or Biol 1009 or #)

First 5 wk, Sec 50, TTh, 6:20-8:50, EltH N119, Chapman

Psy 3101 INTRODUCTION TO PERSONALITY. 4 credits, \$5101, tuition*: Resident \$284; Non-resident \$823.60. (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)

Ten wk, Sec 50, Th, 6-8:30, ApH 103

Psy 3201 INTRODUCTION TO SOCIAL PSYCHOLOGY. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Survey of theories and research in social psychology. Includes the effects upon the individual's attitudes and behavior of other persons, mass communications, and group membership. (Prereq 1001)

Ten wk, Sec 50, T, 6-8:30, SmithH 111, Fleming

Psy 3604 INTRODUCTION TO ABNORMAL PSYCHOLOGY. 4 credits, \$5604, tuition*: Resident \$284; Non-resident \$823.60. (IS)

The field of abnormal psychology. Etiologies of behavior disorders; discussion of available treatments. (Prereq 1001. Limited to 55)

Ten wk, ★Sec 50, M, 6-8:30, Phys 131

Psy 3801 INTRODUCTION TO STATISTICAL METHODS. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

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 50)

Ten wk, ★Sec 50, T, 6-8:30, BuH 123

Ten wk, ★Sec 51, W, 6-8:30, EltH N119

Psy 3960 SPECIAL TOPICS: PSYCHIATRY AND SOCIAL CONTROL. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Topics include definitions of mental illness, social labeling, anti-psychiatry and the writings of Thomas Szasz, deinstitutionalization, involuntary hospitalization, homelessness, civil commitment, right to refuse treatment, cocaine mothers, insanity defense, release from hospital. (No prereq)

First 5 wk, Sec 50, TTh, 6-8:30, MoosT 2-580, Kroll

Psy 5141 PSYCHOLOGY OF WOMEN. 4 credits, tuition*: Resident \$284; Non-resident \$823.60; Resident Graduate credit \$640; Non-resident Graduate credit \$1280.

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)

Ten wk, Sec 50, Th, 6:20-8:50, BuH 123

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Public Health (PubH)

(A302 Mayo: 624-6669)

Textbooks for most PubH courses are available at the Health Sciences Bookstore (6258600)

Ruth Ellen Luehr, Lecturer, Maternal and Child Health

John Yoakum, Lecturer, Maternal and Child Health

PubH 5648 SEXUAL ORIENTATION—ISSUES FOR ADOLESCENTS. 3 credits, tuition*: Resident \$270; Non-resident \$783; Resident Graduate credit \$282; Non-resident Graduate credit \$564.

An exploration of adolescent sexual orientation from the perspective of individual identity, impact of the community, and response of the community toward gay/lesbian/bisexual youth; and interventions or roles of professionals in the school and community. **Must be taken A-F.** (Prereq B.A. in education, health, social services or work experiences with adolescents. Inquire about graduate credit at the time of registration)

Spec Term, Sec 50, MTWTh, June 21-24, 28-July 1, 8:15-11:45 a.m., Mayo A-269, Luehr, Yoakum

Eleventh Annual Summer Occupational
Health and Safety Institute

August 23-September 3, 1993

This intensive, interdisciplinary course of study is designed for professionals currently or soon-to-be practicing in the field of occupational health and safety. Thirteen individual, graduate-level courses will be offered over the two-week period on the Minneapolis campus.

Courses include: Ergonomics in Occupational Health, Hazardous Waste Management, Industrial and Occupational Toxicology, Industrial Hygiene Engineering, Introduction to Health Risk Assessment, Introduction to Occupational Safety, Occupational Health Seminar, Principles in Occupational Epidemiology, Principles of Management in Health Services Organizations, Theory and Practice of Occupational Health, Topics in Occupational Medicine, Topics: Electromagnetic Fields, and Ventilation Control of Occupational Hazards. *These 13 courses are designated for Category 1 credit of the Physician's Recognition Award of the American Medical Association, are designed to meet the requirements of the Minnesota Board of Nursing for nursing contact hours, and have been awarded Maintenance of Certification Points by the American Board of Industrial Hygiene.*

For further information, contact: 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.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

Religious Studies (ReIS)

(220 Johnston Hall: 624-8006)
College of Liberal Arts

Textbooks for most ReIS courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Roger Brooks, Visiting Professor of Jewish Studies
Jasper S. Hopkins, Professor

ReIS 3541 THE HOLOCAUST. 4 credits, §JwSt 3521, tuition*(includes \$4 course fee): Resident \$288; Non-resident \$827.60.

Nazi destruction of Jewish life in Europe, 1933-45. Historical, social background of European Jewish communities. Anti-Semitism and Nazism. Ghettos under Nazi rule; social and cultural organization, government. Nazi terror and destruction; Jewish resistance; historical consequences. (No prereq. Meets concurrently with JwSt 3521)

First 5 wk, Sec 50, TTh, 6:20-8:50, FolH 104, Brooks

ReIS 5521 PHILOSOPHY OF RELIGION. 4 credits, §Phil 5521, tuition*: Resident \$284; Non-resident \$823.60; Resident Graduate credit \$640; Non-resident Graduate credit \$1280.

Grounds and sanctions of religion according to various philosophies. (Prereq 8 cr philosophy courses. Qualified students may register for graduate credit at the University of Minnesota)

Second 5 wk, Sec 50, TTh, 6:20-8:50, BlegH 330, Hopkins

Research Explorations

(See page 100)

Rhetoric (Rhet)

(202 Haecker: 624-3445)
College of Agriculture

Textbooks for most Rhet courses on the Minneapolis campus are available at the Minnesota Book Center in Williamson Hall (625-6000); books for courses on the St. Paul campus are available at Books Underground (624-9200)

Sandra Becker, Associate Professor
J. Michael Bennett, Associate Professor
Signe Betsinger, Professor
JoAnn De Vries, Associate Librarian
Richard Ferguson, Associate Professor
Craig Hansen, Lecturer

Robert Kibler, Teaching Assistant
Theresa Theesfeld, Teaching Assistant
Kimberly Tressel-Wharton, Teaching Assistant
James Verhoye, Teaching Assistant

Rhet 1104 LIBRARY RESEARCH METHOD. 1 credit, tuition*: Resident \$68.50; Non-resident \$198.65.

On-site and interactive video instruction in information retrieval techniques to strengthen skills in using the library. Students work independently to satisfactorily complete all exercises and problem-solving assignments. Students must attend an initial orientation session. Computer-assisted instruction. Microcomputer lab card required. Must be taken SN. (No prereq. Limited to 30)

Ten wk, ★Sec 50, W, 5-5:50, CofH 120, StP Campus, De Vries

Rhet 1151 WRITING IN YOUR MAJOR. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

Students investigate and write about subjects related to their majors. Emphasis on gathering, evaluating, synthesizing, and summarizing information; adapting it for various audiences. Assignments include literature review, abstract, fact sheet, instructions, and feature article. (Prereq 1104, completion of freshman communication requirement, and sophomore status. Limited to 23)

Ten wk, ★Sec 50, Th, 6-8:30, ClaOff 135, StP Campus, Tressel-Wharton

Rhet 1160 EFFICIENT COLLEGE READING. 3 credits, \$5160, tuition*(includes \$3 course fee): Resident \$208.50; Non-resident \$598.95. (IS)

Factors for successful college reading; application of psycholinguistic and cognitive reading theories; 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 50, T, 6-8:30, FordH 120, Bennett

Rhet 1222 PUBLIC SPEAKING. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

Practical course in fundamentals of effective speechmaking. Emphasis on researching and organizing a speech and communicating with an audience. (Prereq completion of freshman communication requirement. Limited to 18)

First 5 wk, ★Sec 50, MW, 6-9:20, CentLib 4, StP Campus, Verhoye

Ten wk, ★Sec 51, Th, 6-9:20, CentLib 4, StP Campus, Bennett

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Rhet 3380 HUMANITIES: THE LITERATURE OF SOCIAL REFLECTION. 2 credits, tuition*: Resident \$161; Non-resident \$466.90.

A brief examination of contemporary social issues as reflected in cultural documents. The uses of imaginative literature as a forum where social questions are discussed, evaluated, and resolved. (No prereq. Limited to 20)

Ten wk, ★Sec 50, T, 6:20-7:40, HckrH 111, StP Campus, Theesfeld

Rhet 3562 WRITING IN YOUR PROFESSION. 4 credits, tuition*: Resident \$322; Non-resident \$933.80. (IS)

Projects in writing professional reports. Analyses of audience and situation; writing effectively to meet the needs of particular readers. Assignments include writing instructions, feasibility report, proposal, memorandum, letter of application, and resumé. Sec 50 is computer-assisted instruction; microcomputer lab card required. (Prereq freshman communication requirement, 1151, jr or sr status. Limited to 20)

First 5 wk, ★Sec 50, MW, 6-8:30, ClaOff 135, StP Campus, Kibler

Ten wk, ★Sec 51, W, 6-8:30, HckrH 302, StP Campus, Becker (Limit 22)

Rhet 5160 COLLEGE READING. 4 credits, \$1160, tuition* (includes \$3 course fee): Resident \$325; Non-resident \$936.80; Resident Graduate credit \$379; Non-resident Graduate credit \$755.

Examination and application of adult reading theories and teaching practices. Observe and participate in Rhetoric 1160 class, and an additional ten hours of seminar meetings. Prepare a research paper and a teaching module for college reading. (Prereq Rhet 1160 or equivalent or #. Meets concurrently with 1160. Qualified students may register for graduate credit at the University of Minnesota. Limited to 10)

Ten wk, ★Sec 50, T, 6-9:20, FordH 120, Bennett

Rhet 5560 EDITING FOR TECHNICAL COMMUNICATION. 4 credits, tuition*: Resident \$322; Non-resident \$933.80; Resident Graduate credit \$376; Non-resident Graduate credit \$752.

An introduction to editing for technical communicators. The course focuses on the editorial process; editor-writer relationship; copyediting; preparing scientific and technical documents; handling format, visuals, and quantitative materials. (Prereq STC premajor, major or graduate. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Second 5 wk, ★Sec 50, TTh, 5-8:20, HckrH 210, StP Campus, Hansen

Rhet 5573 GRANT PROPOSAL. 3 credits, tuition*: Resident \$241.50; Non-resident \$700.35; Resident Graduate credit \$282; Non-resident Graduate credit \$564.

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, freshman communication requirement, 3562 or grad status, or #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

First 5 wk, ★Sec 50, TTh, 4-6:30, ClaOff 30, StP Campus, Betsinger

Scandinavian Languages and Literature (Scan)

(200 Folwell Hall: 625-9887)

College of Liberal Arts

Textbooks for most Scan courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

William Mishler, Associate Professor

Scan 3601 GREAT LITERARY WORKS OF SCANDINAVIA. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Major literary works from the Middle Ages to the present. (No prereq)

First 5 wk, Sec 50, TTh, 6:20-8:50, FolH 116, Mishler

Secondary Education (SeEd)

(125 Peik Hall: 625-6372)

College of Education

(Department of Curriculum and Instruction)

Textbooks for most SeEd courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

SeEd 3600 STUDENT TEACHING. Credit arranged. Tuition* each credit: Resident \$77; Non-resident \$223.30.

Supervised teaching for students wishing to elect credits in student teaching in addition to regular requirements. **Must be taken S-N.** (Prereq Δ)

Spec Term, Sec 50, MTWThF, 9 a.m.-4, Aug. 30-Sept. 22, Selected Metro Public Schools

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

Social Work (SW)

(400 Ford Hall: 624-5888)

College of Human Ecology

Textbooks for most SW courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

D. Michael Graham, Instructor
Einat Peled, Lecturer
Ron Rooney, Instructor
Oliver Williams, Instructor

SW 5010 SEMINAR: SPECIAL TOPICS—CHILD WITNESSES OF WOMEN BATTERING: Issues and Interventions. 3 credits, tuition*: Resident \$241.50; Non-resident \$700.35; Resident Graduate credit \$480; Non-resident Graduate credit \$960.

Reviews current theories and research on the effects of violence on witnessing children and examines a variety of interventions with children of battered women. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

First 5 wk, ★Sec 50, MW, 5-8, FordH 170, Peled

SW 5010 SEMINAR: SPECIAL TOPICS—FACULTY ROLE: Scholarship, Teaching, and Service. 3 credits, tuition*: Resident \$241.50; Non-resident \$700.35; Resident Graduate credit \$480; Non-resident Graduate credit \$960.

Focuses on issues and skills in faculty roles including teaching, scholarship, and service with emphasis on social work but relevant for other professional educators. The course includes feminist and adult learner perspectives. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

First 5 wk, ★Sec 50, TTh, 4:15-7, FordH 170, Rooney

SW 5010 SEMINAR: SPECIAL TOPICS—HUMAN BIOLOGY AND SOCIAL WORK. 3 credits, tuition*: Resident \$241.50; Non-resident \$700.35; Resident Graduate credit \$480; Non-resident Graduate credit \$960.

Basic concepts in developmental biology are presented, including their interaction with psychological and socio-cultural factors. (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

First 5 wk, ★Sec 50, TTh, 5-8, FordH 175, Graham

SW 5601 ETHNO-CULTURAL CONCEPTS IN SOCIAL WORK PRACTICE. 4 undergraduate credits, tuition*: Resident \$322; Non-resident \$933.80. 3 graduate credits, tuition*: Resident Graduate credit \$480; Non-resident Graduate credit \$960.

Relation of ethno-cultural concepts to the development of social welfare policies and services, and social work practice. Critical examination of commonalities of principle and cross-ethnic issues that integrate ethno-cultural dimensions and identification of significant orientations toward welfare issues and practices among the four major ethnic minority groups of color (American Indian, Asian American, black, Hispanic). The contribution of each to effective interpersonal and intra-group relationships with the social service delivery system will be discussed. *The course meets in the Employee Development Classroom (Level A of the Hennepin County Government Center). Enter the building on the north side of 6th Street, under the skyway, take the escalator downstairs to Level A. Parking is available after 4 p.m. in the Hennepin County underground garage for \$2 maximum. For Hennepin County Community Service social workers who are earning 27 graduate credits, this course meets the core requirement for ethno-cultural concepts.* (No prereq. Qualified students may register for graduate credit at the University of Minnesota. Limited to 25)

Ten wk, ★Sec 50, T, 4:45-7:45, Henn Co Govt Ctr, Williams

Sociology (Soc)

(909 Social Sciences: 624-4300)

College of Liberal Arts

Textbooks for most Soc courses are available at the Harold D. Smith Bookstore on the West Bank campus (625-3000)

Jeffrey Broadbent, Assistant Professor
William Brustein, Associate Professor
Robert Fulton, Professor
Joel Nelson, Professor

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Soc 1001 INTRODUCTION TO SOCIOLOGY. 4 credits, tuition*: Resident \$274; Non-resident \$794.60. (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 50, MW, 6-8:30, BlegH 210, Brustein

Second 5 wk, Sec 51, TTh, 6-8:30, BlegH 210, Fulton

Soc 3401 PRINCIPLES OF SOCIAL ORGANIZATION. 5 credits, \$3506, tuition*: Resident \$355; Non-resident \$1029.50.

How and why social organization is possible. Major concepts and theories of social structure, primary forms of social organization (groups, communities, networks, formal organizations), basic social processes (integration, differentiation, regulation, change), and how social organization evolves from individual decision making. Course content varies. (Prereq 1001, 3801 or equivalent. Limited to 40)

First 5 wk, ★Sec 50, MW, 6-9, BlegH 105, Nelson

Soc 3405 INEQUALITY: INTRODUCTION TO STRATIFICATION. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Inequality—causes, dimensions, and consequences. Inequality in American society—class, gender, and race; cross-national patterns of inequality; relationship between economic and political inequality; role of schools in transmission of inequality; public policies affecting inequality. (Prereq 1001)

Second 5 wk, Sec 50, MW, 6-8:30, AndH 330, Brustein

Soc 3960 TOPICS IN SOCIOLOGY: ENVIRONMENTAL SOCIOLOGY. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

The relationship which society has with the natural environment; social forces which cause and prevent pollution. (Prereq 1001 or #)

First 5 wk, Sec 50, TTh, 6-8:30, BlegH 255, Broadbent

Soc 5956 SOCIOLOGY OF DEATH. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Issues and problems that mortality presents in contemporary society. (Prereq jr or sr, 8 cr sociology or #. Qualified students may register for graduate credit at the University of Minnesota)

Second 5 wk, Sec 50, MW, 6-8:30, AndH 350, Fulton

Soil Science (Soil)

(439 Borlaug Hall: 625-1244)

College of Agriculture

(See also REX 0105, The Impact of Soil Fertility on Crop Productivity and REX 0148, Microbial Purification of Soils and Groundwater)

Textbooks for most Soil courses are available at Books Underground on the St. Paul campus (624-9200)

Terence Cooper, Associate Professor of Soil Science

Soil 5022 INTRODUCTORY SOIL SCIENCE FOR TEACHERS. 4 credits, \$1020, tuition*:

Resident \$322; Non-resident \$933.80; Resident Graduate credit \$376; Non-resident Graduate credit \$752.

Basic concepts of introductory soil science especially designed for teachers. Lecture, laboratory discussion, and field trips. Teachers will have opportunities to collect materials and prepare hands-on laboratory experiments for their students in soil science, biology, chemistry, elementary science, earth science, and environmental studies. (Prereq 1 course in college chemistry, a degree in education or #. Qualified students may register for graduate credit at the University of Minnesota. Meets concurrently with 1020. Limited to 25)

Spec Term, ★Sec 50, June 21, 22, 23, 24, 25, 28, 29, 30, July 1, 2, 8:30 a.m.-3:30, BorH 375 (lecture), BorH 243 (lab), StP Campus, Cooper

South Asian and Middle Eastern Studies

See Area Studies Programs, page 39, and Institute of Languages and Literatures, page 68.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

Spanish (Span) and Portuguese (Port)

(34 Folwell Hall: 625-5858)
College of Liberal Arts

(See also REX 0903, The Pragmatics of Word Order in Spoken Spanish)

Textbooks for most Span and Port courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

René Jara, Professor
Luis Ramos-García, Assistant Professor
Antonio Ramos-Gascón, Professor
Roberto Reis, Associate Professor
Ronald Sousa, Professor
Nicholas Spadaccini, Professor
Hernán Vidal, Professor
Anthony N. Zahareas, Professor

Reading Spanish

Span 0221 is specifically designed for individuals who desire only a reading knowledge of the language. The Spanish language requirements for a graduate degree also may be satisfied by successfully passing an examination given at the end of the course. Graduate students should check with their advisers for specific language requirements in their field of study.

Span 0221 READING SPANISH. No credit, tuition*: \$274. (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)

First 5 wk, Sec 50, TTh, 6-8:30, FolH 218, Zahareas

Span 1103 BEGINNING SPANISH. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25. (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 50, MW, 6-8:50, FolH 246

Span 1104 INTERMEDIATE SPANISH. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25. (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)

First 5 wk, ★Sec 50, MW, 6-8:50, FolH 104

Second 5 wk, ★Sec 51, TTh, 6-8:50, FolH 104

Span 1105 INTERMEDIATE SPANISH. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25. (IS)

For description, see 1104. (Prereq 1104 or #. Limited to 25)

First 5 wk, ★Sec 50, TTh, 6-8:50, FolH 208, Ramos-García

Span 1106 INTERMEDIATE SPANISH. 5 credits, tuition*: Resident \$342.50; Non-resident \$993.25.

For description, see Span 1104. (Prereq 1105 or #. Limited to 25)

Second 5 wk, ★Sec 50, MW, 6-8:50, FolH 326, Reis

Span 3002 READING FOR SPEED AND COMPREHENSION. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Sharpen reading skills, expand vocabulary, improve comprehension. Variety of practical and literary materials will be read; discussion of readings, student presentations, short papers. (Prereq 1106 or equivalent. Limited to 15)

Second 5 wk, ★Sec 50, MW-6-8:50, FolH 246, Jara

Span 3614 DON QUIJOTE: A STUDY OF LOST ILLUSIONS. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

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 50, TTh, 6-8:30, FolH 50, Spadaccini

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Span 3615 LITERATURE AND FILM. 4 credits, tuition*: Resident \$284; Non-resident \$823.60. Artistic techniques and social content in literature and cinema of Spanish- and Portuguesespeaking worlds. Taught in English and Spanish. (No prereq. **May not be used for Spanish or Portuguese major credit.** Limited to 50)
Second 5 wk, ★Sec 50, TTh, 6-8:30, FolH 246, Vidal

Speech-Communication (Spch)

(460 Folwell Hall: 624-5800)
College of Liberal Arts

Textbooks for most Spch courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Spch 1101 FUNDAMENTALS OF SPEECH COMMUNICATION: ORAL COMMUNICATION. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

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 50, MW, 6-8:30, FolH 148

First 5 wk, ★Sec 51, TTh, 6-8:30, FolH 234

Second 5 wk, ★Sec 52, TTh, 6-8:30, FolH 234

Spch 1313 ANALYSIS OF ORAL ARGUMENT. 4 credits, tuition*: Resident \$274; Non-resident \$794.60.

Strategies for analyzing and evaluating arguments received aurally. Problems in listening and responding to argument. (No prereq. Limited to 22)

First 5 wk, ★Sec 50, TTh, 6-8:30, FolH 246

Second 5 wk, ★Sec 51, MW, 6-8:30, FolH 318

Spch 3411 SMALL GROUP COMMUNICATION PROCESSES. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

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)

First 5 wk, ★Sec 50, MW, 6-8:30, FolH 50

Second 5 wk, ★Sec 51, TTh, 6-8:30, FolH 419

Spch 3451 INTERCULTURAL COMMUNICATION: THEORY AND PRACTICE. 4 credits, §UC 3701, tuition*: Resident \$284; Non-resident \$823.60.

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 50, MW, 6-8:30, FolH 344

Statistics (Stat)

(270a Vincent Hall: 625-8046)
College of Liberal Arts

Textbooks for most Stat courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Stat 3091 INTRODUCTION TO PROBABILITY AND STATISTICS. 4 credits, §5121, 5131, tuition*: Resident \$284; Non-resident \$823.60.

Elementary probability and probability distributions, sampling and elements of statistical inference. (Prereq differential and integral calculus)
Ten wk, Sec 50, T, 6:15-8:45, Phys 166

Study Skills

See Learning and Academic Skills, page 70. See also pages 96-97.

Textiles and Clothing (TexC)

(240 McNeal Hall: 624-9700)
College of Human Ecology

Design, Housing, and Apparel

Textbooks for most TexC courses are available at Books Underground on the St. Paul campus (624-9200)

TexC 3218 (formerly 3660) COMPUTER-AIDED DESIGN OF APPAREL. 4 credits, §3660, tuition*(includes \$7.50 special fee): Resident \$329.50; Non-resident \$941.30.

An understanding of apparel technology and how it affects the design and manufacture of clothing using computer design and drafting systems. (No prereq. Limited to 19)

Ten wk, ★Sec 50, TTh, 3:30-6, McNH 305 (IBM Lab), StP Campus

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

TexC 3262 (formerly 3601) TAILORING. 4 credits, \$3601, tuition*: Resident \$322; Non-resident \$933.80.

Principles of structuring tailored garments. Analysis of hand, machine, and fusing methods. (Prereq demonstrated proficiency in clothing construction or #)

Ten wk, Sec 50, TTh, 7-10, McNH 205, 212, 216, StP Campus

TexC 3263 (formerly 3663) WOMEN'S TEXTILE ARTS: A HISTORICAL PERSPECTIVE. 3 credits, \$3663, tuition*: Resident \$241.50; Non-resident \$700.35.

Historical overview of women's involvement in textile arts in domestic environments of everyday life; aesthetic, economic, and social significance. (No prereq)

First 5 wk, Sec 50, TTh, 3:30-6, McNH 216, StP Campus

Vocational and Technical Education (VoEd)

(R350 Vocational/Technical Building: 624-1221)

College of Education

Vocational and Technical Education

Textbooks for most VoEd courses are available at Books Underground on the St. Paul campus (624-9200)

National Youth Leadership Council's

Fifth Annual Summer Service-Learning Teacher Institute

July 12-17, 1993

SPECIAL TOPICS IN INSTRUCTION: SUMMER SERVICE-LEARNING TEACHER INSTITUTE (VoEd 5100, 3 credits). Experientially based course for educators interested in integrating service-learning into the school curriculum, co-curricular activities, or youth agencies. Course covers rationale, philosophy, and purposes of servicelearning in schools and youth-serving agencies; design, development, and implementation of curriculums and programs in which young people serve their communities; and exploration of learner outcomes and evaluation/assessment of projects. Instructors are James Toole, Pamela Toole, and James Kielsmeier. *Residency required at Wilder Forest Retreat Center, Stillwater, for six-day course.* (No prereq. Qualified students may register for graduate credit at the University of Minnesota)

To register, and for course information regarding tuition, fees, space availability, graduate credit, and details of course content, contact the National Youth Leadership Council, 1910 W. Cty Rd B, Roseville, MN 55113; telephone (612) 631-3672.

Women's Studies (WoSt)

(492 Ford Hall: 624-6006)

College of Liberal Arts

Textbooks for most WoSt courses are available at the Minnesota Book Center in Williamson Hall (625-6000)

Dorothy Loeffler, Associate Professor
Jessica K. Morgan, Teaching Assistant
Nancy Potter, Teaching Assistant

Continuing Education for Women (CEW) sections available in the following courses: CEW 3205, 5205

(See also CSch 0231, Exploring Mother-Daughter Relationships and REX 0607, Women in Science, Engineering, and Mathematics Majors)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

WoSt 3204 SEXUALITY AND SELF-IMAGE. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Social attitudes toward sexuality and how they influence our sense of ourselves. Focus on art, pornography, rape, the economy, psychosexual development, and the family. (Prereq 1001, 1002, 1003 or #. Limited to 40)

First 5 wk, ★Sec 50, MW, 5:30-8, FordH 120, Potter

WoSt 3205 (formerly 3301) WOMAN: A SENSE OF IDENTITY. 4 credits, \$5205, tuition*: Resident \$284; Non-resident \$823.60.

Exploration of social and psychological factors which inhibit or enhance a woman's continuously developing sense of identity. Learning who you are, what you want, and how to take appropriate action. Exercises in power, body image, goal setting, and assertion skills in difficult situations. Journal writing, small-group work, and a project are part of the class requirements. (No prereq. No auditors. Students are expected to attend all class sessions. Meets concurrently with 5205. Limited to a combined total of 40)

Ten wk, ★Sec 50, T, 6:15-9:15, CivMinE 212, Loeffler. Offered through Continuing Education for Women

WoSt 3500 TOPICS IN WOMEN'S STUDIES: WOMEN AND SOCIAL MOVEMENTS. 4 credits, tuition*: Resident \$284; Non-resident \$823.60.

Explores the involvement of diverse groups of women in social movements. Focuses on contemporary social movements in United States, but also will discuss past social movements and social movements in other parts of the world. (No prereq)

Second 5 wk, Sec 50, MW, 5:30-8, FordH 120, Morgan

WoSt 5205 WOMAN: A SENSE OF IDENTITY. 4 credits, tuition*: Resident \$284; Non-resident \$823.60; Resident Graduate credit \$640; Non-resident Graduate credit \$1280.

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)

Ten wk, ★Sec 50, T, 6:15-9:15, CivMinE 212, Loeffler. Offered through Continuing Education for Women

Youth Studies (YoSt)

(386 McNeal Hall: 624-3700)

College of Human Ecology
(School of Social Work)

Textbooks for most YoSt courses are available at Books Underground on the St. Paul campus (624-9200)

Mary K. Burnison, Instructor

YoSt 5120 INDEPENDENT STUDY IN YOUTH STUDIES. Credits arr (maximum 12 cr), tuition* each credit: Resident \$80.50; Non-resident \$233.45; Resident Graduate credit \$160; Non-resident Graduate credit \$320.

Independent reading and/or research under faculty supervision. **No late fees for Independent Study.** (Prereq #. Qualified students may register for graduate credit at the University of Minnesota)

First 5 wk, Sec 50, Arr, Burnison

Second 5 wk, Sec 51, Arr, Burnison

YoSt 5130 SPECIAL TOPICS IN YOUTH STUDIES: STREET YOUTH WORK. 3 credits, tuition*: Resident \$241.50; Non-resident \$700.35; Resident Graduate credit \$480; Non-resident Graduate credit \$960.

In-depth examination of philosophy and praxis of detached street work with adolescents including similarities/differences to other forms of youth work, current practice issues, relationship to current youth issues, the role these workers play in overall human service milieu, and their potential to affect youth policy. (Prereq CPsy 3303 or YoSt 5330, 6 cr in social sciences, experience in youth work and #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 20)

Spec Term, ★Sec 50, FSaM, 8 a.m.-4:30, June 18, 19, 21, McNH 386A, StP Campus

YoSt 5201 YOUTH WORK PRACTICE: INTERNSHIP AND SEMINAR. 4 credits, tuition*: Resident \$322; Non-resident \$933.80; Resident Graduate credit \$640; Non-resident Graduate credit \$1280.

Two-hour seminar and 30 hours of fieldwork each week. Students reflect on and integrate knowledge about youth with ongoing experience in work with youth. (Prereq Soc 1001, Psy 1001, CPsy 3303, YoSt 3100 and #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 15)

First 5 wk, ★Sec 50, T, 3:30-5:30, McNH 386A, StP Campus, Burnison

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Course Descriptions

YoSt 5202 YOUTH WORK PRACTICE: INTERNSHIP AND SEMINAR. 4 credits, tuition*: Resident \$322; Non-resident \$933.80; Resident Graduate credit \$640; Non-resident Graduate credit \$1280.

Two-hour seminar and 30 hours of fieldwork each week. Students reflect on and integrate knowledge about youth with ongoing experience in work with youth. (Prereq 5201 and #. Qualified students may register for graduate credit at the University of Minnesota. Limited to 15)

Second 5 wk, ★Sec 50, T, 3:30-5:30, McNH 386A, StP Campus, Burnison

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Noncredit Courses

Credit courses are listed beginning on page 35.

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 and advanced courses which introduce participants to topics and disciplines not studied before, and help them investigate in greater depth areas with which they are already familiar.

The Compleat Scholar (CSch) is a non-credit 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; Writing; Literature;* and *Natural and Physical Sciences*. 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: *University Access; Management Advancement Program; Human Development;* and *...Etcetera*. (There are no Management Advancement Program courses offered this summer.)

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 91 for CSch offerings and page 96 for PSch offerings.

Continuing Education for Women

The University of Minnesota has a long history of involvement in women's education. Continuing Education for Women (CEW) continues this tradition by offering quality, innovative, and timely programs using University resources. As part of the Compleat and Practical Scholar curriculum, CEW regularly offers noncredit courses to meet women's needs and interests in an ever-changing society, including CSch 0231 Exploring MotherDaughter Relationships this summer.

Continuing Education for Women also offers credit classes in times, formats, and locations designed to accommodate students' needs. Most credit classes meet once a week during the day at off-campus locations. The following credit courses are being offered through CEW this summer:

Engl 3671	The Novel
Psy 1001	Introduction to Psychology
WoSt 3205/5205	Woman: A Sense of Identity

For information on CEW credit classes, call 624-5267.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Noncredit Courses

Cooperative Noncredit Courses

The Minneapolis Institute of Arts, the Bell Museum of Natural History, the Minnesota Zoo, and the Minnesota Landscape Arboretum all cooperate with the Compleat and Practical Scholar to offer numerous noncredit learning opportunities in the arts, natural history, science, and horticulture/landscaping. Classes usually meet at the respective locations of these organizations, and a tuition discount is available for current members (see tuition section below). Cooperative courses offered this summer are:

Mpls Institute of Arts	CSch 0108
Bell Museum	CSch 0521

Minnesota Zoo	CSch 0593
Landscape Arboretum	CSch 0174, CSch 0175, PSch 0959

II. University Research Explorations (REX)

Telephone 624-5092 for information.

Join a University of Minnesota research team and share in the spirit of discovery. The Research Explorations program provides the general public with unique experiential learning in diverse fields—the sciences, humanities, education, health sciences, agriculture, and others.

See page 100 for complete REX information and project descriptions.

THE
COMPLEAT
SCHOLAR



THE
PRACTICAL
SCHOLAR

Registration in Compleat and Practical Scholar Courses

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 7. Late registration dates are listed with course descriptions for each noncredit class.

Books for Compleat and Practical Scholar Courses

In some cases students will be expected to purchase texts for classes. When the pur-

chase of books is advised, those books will usually be available at the Minnesota Book Center in Williamson Hall on the East Bank campus of the University. See bookstore hours on page 28.

Tuition for Compleat and Practical Scholar Courses

See course descriptions below for tuition charges.

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

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

during the period for which the course is held if on a 9-month or 11-month appointment; and those on maternity or other leaves without pay. Employees on student appointments, family members of University employees, and laid-off employees are not eligible for this reduced tuition plan. When registering, employees must submit a letter from their supervisor or the head of their department verifying employment. For limited-enrollment classes, 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-percent discount on all noncredit classes. Persons who have current memberships with Walker Art Center, the Minneapolis Institute of Arts, the Bell Museum, the Minnesota Zoo, and the Minnesota Landscape Arboretum receive 10-percent discounts in those classes offered cooperatively with these organizations (see individual course descriptions for tuition). Only one 10-percent discount may be applied to each registration. Participants pay full course and special fees, if any.

Refund Schedule for Compleat and Practical Scholar Courses

Students who wish to cancel registration in a course must do so officially, either in person or by writing to Extension Classes, 101 Wesbrook Hall, University of Minnesota, 77 Pleasant Street S.E., Minneapolis, MN 55455. By doing so, they will, if eligible, receive a refund according to the following schedule:

1 session class	100% before class meets 0% after class has met
2 session class	100% before class meets 0% after first class

3-4 session class	100% before class meets 50% before second class 0% after
5 or more sessions	100% before class meets 75% before second class 50% before third class 0% after

Refund requests for one- or two-day classes or seminars must be received in writing or in person three working days in advance of the class. Registrants who fail to attend or to cancel properly are liable for the entire fee. Special, course, and late fees are not refundable in any case.

The Compleat Scholar summer course offerings:

The Arts

CSch 0108 GEORGIA O'KEEFFE AND ALFRED STIEGLITZ: TWO LIVES SHARED AND COMPARED. No credit, \$32 (age 62 and MIA members, \$28.80).

"Two lives, a man's and a woman's, distinct yet invisibly joined," reads a 1917 review of Georgia O'Keeffe's paintings then on view at the New York gallery of photographer and impresario Alfred Stieglitz. O'Keeffe and Stieglitz—iconoclast artists, arch modernists, and fiercely independent spirits—formed one of the most unique and well-known artists' marriages of the century; the subject of numerous textbooks, novels, and films. "Two Lives: Georgia O'Keeffe and Alfred Stieglitz—A Conversation in Paintings and Photographs" is the first major exhibition to explore the aesthetic vision this couple shared. A series of three lectures in conjunction with this exhibition at the Minneapolis Institute of Arts will examine the historical and cultural context of their relationship in the early decades of this century and then survey and assess the common ground and divergent points of their respective artmaking. (Offered in cooperation with the Minneapolis Institute of Arts. Both MIA and Compleat Scholar will accept registrations)

Spec Term, Sec 50, Th, 7-9, July 22 and 7-8, July 29, Aug. 5 (3 meetings), Mpls Institute of Arts, Pillsbury Auditorium, 2400 3rd Ave. South. *No late fee through July 15.*

(Patricia McDonnell is the curator of the Frederick R. Weisman Art Museum at the University of

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Noncredit Courses

Minnesota. Her specialty is the early modernism of American art, a topic on which she has written and lectured widely. David Noble is a professor of American studies at the University of Minnesota. His major interest is in issues of national identity from the late 19th century to the present)

CSch 0114 THE POWER OF SEEING: RESPONDING TO IMAGES. No credit, \$60 (age 62, \$54).

"You must discover the art work that you like and realize the response that you make to it," states Agnes Martin, painter. What's in a picture? If a picture is worth a thousand words, what would some of those words be? By looking at art work and slides in class, and visiting galleries during one class period, practice trusting your visual eye and learn to express what you see and feel in visual art. Address questions related to the creative process as you discover how you are influenced by what you see. Read from art, art criticism, philosophy of art, and psychology—fields that concern themselves with the interpretation of imagery. (Limited to 35)

Spec Term, ★Sec 50, Th, 10 a.m.-12, June 10-July 1 (4 meetings), Hennepin Center for the Arts, room 703, 528 Hennepin Ave., Mpls. *No late fee through June 3.*

(Nina S. Ross, Ph.D. candidate in the psychology of art at the Union Institute in Ohio, is an instructor at Metro State University and Ashlar Institute. She is an artist and art therapist in private practice)

CSch 0127 RIVER RAMBLE: DISCOVERING RIVER TOWN ARCHITECTURE. No credit, \$62 (age 62, \$55.80).

Following an evening slide orientation on three of Minnesota's unique river towns, Stillwater, Marine on St. Croix, and Taylor's Falls, join architecture historian Alan Lathrop on a leisurely all-day Saturday bus tour (**June 26**) of historic homes and districts of the St. Croix River Valley. View homes of lumber barons and 19th-century pioneer entrepreneurs, and explore the quaint "New England" upper village of Taylor's Falls. Survey the styles, characteristics, and historical context of some of Minnesota's oldest and most distinctive architecture. Visit and picnic on the grounds of the historic Folsom House (bring a picnic lunch). Close with a tour and a rare insider's view of restoring and living in a historic river valley home. (Limited to 25)

Spec Term, ★Sec 50, W, 6-8, June 23 (1 meeting plus field trip), NCEE Library. *No late fee through June 16.*

(Alan Lathrop is the curator of the Northwest Architectural Archives at the University of Minnesota. He is an architecture connoisseur and writer)

CSch 0160 LANDSCAPE PHOTOGRAPHY WORKSHOP. No credit, \$56 (age 62, \$50.40).

A beginning-level workshop in landscape and nature photography held in the beautiful Minnesota River Valley. Includes orientation session for equipment and film review; a half-day field trip (**June 19**) featuring a five-mile hike to native prairies, oak savannas, wildlife-rich swamps and creeks, and two 1860s stone-built homesteads; and a final session for postfield trip critiques. Covers 35mm camera usage, depth of field, lighting, filters, and exposure. Ample time devoted to individual interests and concerns. (Limited to 16)

Spec Term, ★Sec 50, T, 6:30-8:30, June 15, 22, and

July 6 (3 meetings plus field trip—no class June 29), Minnesota Valley National Wildlife Refuge, Classroom B, 3815 East 80th St., Bloomington. *No late fee through June 8.*

(Hal Faulkner holds an M.F.A. from the University of Minnesota. He has been a photographer for 20 years and a teaching assistant at the Ansel Adams photography workshop)

CSch 0169 ON-SITE DRAWING. No credit, \$79 (age 62, \$71.10).

Learn the compositional skills required to draw at such locations as the Como Zoo Conservatory, St. Paul Cathedral, Minneapolis Sculpture Garden, and the University of Minnesota Raptor Center. Become more selective in editing from complex and inspirational settings. Use a variety of mediums such as pencil, ink, charcoal, pastel, and watercolor. Benefit from the interaction with other students both in the classroom and in stimulating surroundings. A supply list will be given during the first session. Locations may vary according to availability. First meeting will be at the St. Paul Student Center. Other locations will be determined at first class meeting. (Limited to 25)

Spec Term, ★Sec 50, Th, 10 a.m.-12, June 24-July 29 (6 meetings), StCen 202, StP Campus. *No late fee through June 17.*

(Mary Kubik is an advanced graduate student in the Department of Design, Housing, and Apparel at the University of Minnesota)

CSch 0174 WATERCOLOR: FLOWER PAINTING WORKSHOP. No credit, \$47 (age 62 and Arboretum members, \$42.30). *Tuition does not include lunch.*

Draw inspiration from the beautiful gardens of the Minnesota Landscape Arboretum. Includes a demonstration of watercolor techniques, individual attention, and the option of painting indoors or outside. Lunch available in the tea room at the Arboretum. Admission fee to Arboretum waived with course registration receipt. (Offered in cooperation with Minnesota Landscape Arboretum. Limited to 20)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Spec Term, ★Sec 50, Th, 9 a.m.-4, July 22 (1 meeting), Minnesota Landscape Arboretum, Classroom 2, 3675 Arboretum Drive, Chanhassen. *No late fee through July 15.*

(*Marija Skutans Netz is an award-winning watercolorist whose paintings are in private and corporate collections. She has taught at the University of Minnesota and is a popular workshop leader and guest speaker*)

CSch 0175 WATERCOLOR: LANDSCAPE PAINTING WORKSHOP. No credit, \$47 (age 62 and Arboretum members, \$42.30). *Tuition does not include lunch.*

Sketch and paint landscapes in the beautiful Minnesota Landscape Arboretum. Includes watercolor techniques demonstration, individual attention, and the option of painting indoors or outside. Lunch available in the tea room. Admission fee to Arboretum waived with course registration receipt. (Offered in cooperation with Minnesota Landscape Arboretum. Limited to 20)

Spec Term, ★Sec 50, Th, 9 a.m.-4, July 1 (1 meeting), Minnesota Landscape Arboretum, Classroom 2, 3675 Arboretum Drive, Chanhassen. *No late fee through June 24.*

(*Marija Skutans Netz is an award-winning watercolorist whose paintings are in private and corporate collections. She has taught at the University of Minnesota and is a popular workshop leader and guest speaker*)

CSch 0184 LEARNING TO WEAVE. No credit, \$132 (age 62, \$118.80).

Have you ever wanted to learn how to weave? Study with an accomplished master weaver in a fully equipped weaving studio. See slides and examples of a variety of textiles ranging from functional objects to textile art. Learn the anatomy of the loom and the basic tools of the trade. Basic design principles and processes, as they relate to woven design, will be covered. Weave small studies which explore color, design, structure, and yarn variables and a finished work which expresses your own world of ideas and experience. (Limited to 16)

Spec Term, ★Sec 50, T, 10 a.m.-12:30, June 15-Aug. 3 (8 meetings), McNH B16, StP Campus. *No late fee through June 8.*

(*Lydia Kulesov, teaching specialist in the Department of Design, Housing, and Apparel, is an accomplished weaver and has exhibited widely at Perspectives Gallery, Rochester Art Center, and the Minneapolis Institute of Arts*)

Mind, Self, and Society

CSch 0231 EXPLORING MOTHER-DAUGHTER RELATIONSHIPS. No credit, \$72 (age 62, \$64.80).

The mother-daughter relationship is one of the most profound, intensely intimate, and sometimes deeply conflicted relationships that women can experience. Students will explore this bond in all its richness and complexity through literature and nonfiction by women writers like Tillie Olsen, Barbara Kingsolver, Audre Lorde, and Adrienne Rich. Philosophical questions discussed include: What is the nature of the mothering of daughters and what is the nature of being a daughter to a mother? What forms do the bond between them take? When is this bond at its best? What duties and cares come with these roles, and what responsibilities are involved in sustaining and nurturing this relationship over a lifetime? Students' own reflections enrich exploration into this central aspect of women's lives.

Spec Term, Sec 50, W, 10:15 a.m.-12:15, June 16-July 14 (5 meetings), Walker Library, 2880 Hennepin Ave. South, Mpls. *No late fee through June 9.*

(*Nancy Potter is a doctoral candidate in the Department of Philosophy at the University of Minnesota. She specializes in moral and political philosophy, and her research includes the analysis of representations and realities of women's relationships. She is a mother of daughters and a daughter of a mother*)

CSch 0290 THE ROMANCE OF KING ARTHUR. No credit, \$64 (age 62, \$57.60).

Was there a King Arthur? Did King Arthur die or is he still alive? Why is it that the legend of King Arthur and his knights remains popular today in spite of the ultimate collapse and failure of the Round Table? Trace the legend of King Arthur from its earliest origins to the time of Malory in the 15th century. Examine Latin chronicles, read *Lancelot* (a French legend), *Sir Gawain and the Green Knight* (an English romance), look at illustrations from *Tristan and Isolde*, and conclude with English accounts of Arthur's death in Malory's *Le Morte D'Arthur*. (Limited to 25)

Spec Term, ★Sec 50, T, 6-8, June 15-July 6 (4 meetings), WaLib 301. *No late fee through June 8.*

(*Stephanie Cain Van D'Elden, a member of the Center for Medieval Studies at the University of Minnesota, earned a Ph.D. in Germanic philology. She has published extensively on medieval subjects, including heraldry, tournaments, coats of arms, and politics*)

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Noncredit Courses

Writing

CSch 0301 CREATIVE WRITING I. No credit, \$78 (age 62, \$70.20).

Designed to focus on challenges and techniques involved in producing fictional (short stories and novels) and nonfictional (memoir) narratives. Challenges include writer's block, the difficulty of starting from scratch (followed by the difficulty of finishing what you've started), and deciding what to include in the story and what to leave out. Includes a look into the process of creating fiction: characterization, plot, dialogue, style, and authenticity of voice. Writing exercises will be offered as students explore new approaches to structure and style. Participants are welcome to bring in work for reading and discussion, and to talk about problems that arise while writing. (Limited to 18)

Spec Term, ★Sec 52, M, 10:15 a.m.-12:15, June 21-Aug. 2 (6 meetings—no class July 5), Walker Library, 2880 Hennepin Ave. South, Mpls. *No late fee through June 14.*

(Todd Finley received his M.A. in creative writing from the University of Minnesota. He currently is enrolled in the English education Ph.D. program)

CSch 0311 READING AND WRITING THE MEMOIR. No credit, \$98 (age 62, \$88.20).

In a relaxed environment, explore the memoir as a genre, taking into account its origins and development and its rich varieties of style and content. Discuss, argue with, and evaluate memoirs written by such authors as Patricia Hampl, Frank Conroy, William Least Heat Moon, and Zora Neale Hurston. Students will select short passages from assigned texts and use them as inspiration for writing of their own. Participants may choose to model content, structure, a technical device, language, style, or voice. Designed to help the student grow as reader, writer, and observer. (Limited to 18)

Spec Term, ★Sec 50, T, 10:15 a.m.-12:15, June 22-July 27 (6 meetings), Washburn Library, 5244 Lyndale Ave. South, Mpls. *No late fee through June 15.*

(Susan Welch is an adjunct faculty member in the Creative Writing Program at the University of Minnesota. She has also taught at Stanford University. Her writing has received numerous awards, including a Bush Foundation grant and a Pushcart Prize)

CSch 0314 DEAR FRIENDS: THE ART OF WRITING LETTERS. No credit, \$42 (age 62, \$37.80).

In a faxed-out world the letter can be the most intimate, telling, and persuasive communication left. Create a

family treasure with thoughtful missives to a child in college or a sibling across the state. Learn to use your pen like a sword and help further a cause. Let your philosophy dazzle, your personality sparkle as you rekindle a romance or start a new one. Describe what being in Venice is really like—not just “wish you were here.” Focus on techniques and exercises to improve your letter-writing skills. Letters from correspondents such as George Bernard Shaw, D.H. Lawrence, and Virginia Woolf will be explored. (Limited to 30)

Spec Term, ★Sec 50, W, 6-8, June 16-30 (3 meetings), AmundH 116. *No late fee through June 9.*

(Patty Lynch is a playwright and avid correspondent. She has taught writing classes at the Playwrights' Center and at colleges across the Midwest)

CSch 0323 NONFICTION WRITING FOR PUBLICATION. No credit, \$84 (age 62, \$75.60).

Develop your writing skills and learn how to sell your work in magazine, newspaper, book, and corporate markets. Designed to meet the needs of individual students. Guest speakers include editors and professional writers from a variety of publications. Receive critiques of your writing in a supportive atmosphere. (Limited to 15)

Spec Term, ★Sec 50, W, 6-8, June 16-July 21 (6 meetings), Washburn Library, 5244 Lyndale Ave. South, Mpls. *No late fee through June 9.*

(Judith Vick has a master's degree in journalism from the University of Minnesota. She is a published author and editor of newspaper and magazine articles and several books, and a market consultant)

Literature

CSch 0446 E. M. FORSTER: FICTION AND FILM. No credit, \$65 (age 62, \$58.50).

Howard's End is the third Merchant-Ivory film adaptation of an E. M. Forster novel. “But is it as good as the book?” you might ask. Examine *Howard's End*, *A Room With a View*, and *Maurice* as film adaptations distinct from, yet connected to, the novels on which they are based. The novels can be seen as documents of the Edwardian era and the films as documents of our era. What does Forster's time look like to us? (Limited to 30)

Spec Term, ★Sec 50, Th, 6-8, June 17-July 15 (5 meetings), ApH 11. *No late fee through June 10.*

(James Berg is a doctoral candidate in English currently studying 20th-century novels, film adaptation, and cultural studies)

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* Tuition definitions of Resident and Non-resident explained on page 9.

CSch 0448 MAIGRET: THE FRENCH POLICE COMMISSIONER. No credit, \$68 (age 62, \$61.20).

Detective novels, although following set classical formulas, are at their best also insightful studies not only of the human psyche, but of the social environment in which the characters act. Georges Simenon, a prolific practitioner of the genre, created one of its most humane and compassionate detectives in Maigret, a French police commissioner. His investigating duties involved him with people from all levels of society, mostly in Paris, but occasionally in the provinces as well. His instinctive understanding of human nature rather than reliance on scientific clues dominates his investigations. The class will discuss *Maigret and the Spinster*, and *Maigret Has Scruples* in detail to gain insight into French society and character. (Offered in cooperation with the Woman's Club of Minneapolis. Limited to 50)

Spec Term, ★Sec 50, Th, 9:30-11:30 a.m., July 22-Aug. 19 (5 meetings), Woman's Club of Mpls, 410 Oak Grove. *No late fee through July 15.*

(Johanna Kheim has taught French and humanities at the University of Minnesota. Her doctoral studies at the University were in comparative literature, with a focus on the 19th- and 20th-century novel)

CSch 0449 THE MYSTERY IN THE MYSTERY: DETECTIVES ON SPIRITUAL JOURNEYS. No credit, \$69 (age 62, \$62.10).

Mystery writer P.D. James asserts that murder mysteries can be successful only in a culture that understands itself as being moral, and that the mystery writer has a particular responsibility to examine and reflect good and evil. Read and discuss Martha Grimes's *Jerusalem Inn* and P.D. James's *A Taste for Death*. Explore the role of the spiritual journey of Richard Jury and Adam Dalglish as they work to solve cases as well as bring spiritual harmony to their lives. Discuss the difference for these detectives between the evil of murder and the evil that destroys the human spirit. What effect does the confrontation of evil as detectives have on their inner struggle for personal justice? Grapple with James's idea that the role of the murder mystery is to mirror cultural morality. It is suggested that participants begin reading the novels before the class begins. (Limited to 25)

Spec Term, ★Sec 50, T, 10:15 a.m.-12:15, June 15-July 13 (5 meetings), St. Anthony Park Library, 2245 Como Ave., StP. *No late fee through June 8.*

(Paula Wilson is an avid mystery reader. She received her doctorate in American studies at the University of Minnesota. Her research focuses on cultural images of women in religion)

Natural and Physical Sciences

CSch 0521 THE CLOCKS OF LIFE: BIOLOGICAL RHYTHMS. No credit, \$34 (age 62 and Bell Museum members, \$30.60).

All organisms, including humans and plants, have an internal time structure that is rhythmic. It would be difficult to conclusively demonstrate a biological phenomenon that is not associated with or influenced by a biological oscillation. This is an opportunity to monitor and learn about some of your own biological traits that display rhythmic behavior as well as those of other organisms. (Offered in cooperation with the Bell Museum of Natural History. Limited to 20)

Spec Term, ★Sec 50, T, 6:30-8:30, June 15 and 22 (2 meetings), BioSci 163, StP Campus. *No late fee through June 8.*

(Willard Koukkari is a professor of biological sciences at the University of Minnesota. His research interests are highly focused in the area of biological rhythms. He is a member of the Board of Directors of the International Society of Chronobiology and is on the editorial board of a journal concerning biological rhythm research)

CSch 0523 EXTINCTION OF THE DINOSAURS. No credit, \$34 (age 62, \$30.60).

About 66 million years ago, dinosaurs, which had been a dominant presence on the earth for 140 million years, became extinct. How rapidly did this happen? Over a few years? Over a few thousand years? And what caused this mass extinction? Climate change? Volcanic eruptions? Meteor impact? Examine the proposed biotic, terrestrial, and extraterrestrial causes for the extinction of the dinosaurs. (Limited to 25)

Spec Term, ★Sec 50, T, 6:30-8:30, June 22 and 29 (2 meetings), PillsH 121. *No late fee through June 15.*

(Robert E. Sloan is a professor in the Department of Geology and Geophysics at the University of Minnesota. A member of the department for 39 years, his research interests include the rocks and fossils of southeastern Minnesota and the extinction of dinosaurs in Montana and China)

CSch 0593 BEHIND-THE-SCENES AT THE ZOO: CONSERVATION, ANIMAL MANAGEMENT, AND EXHIBIT DESIGN. No credit, \$48 (age 62 and Minnesota Zoo members, \$43.20).

Historically, zoos were collections of exotic flora and fauna for the amusement of royalty and the very rich. Later, public museums exposed large audiences to the tremendous beauty and diversity of the world's wildlife. Today's modern zoos preserve endangered and threatened animals through internationally

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Noncredit Courses

coordinated captive breeding programs. Using the Minnesota Zoo as a classroom, gain behind-the-scenes insight into exhibit construction and healthy management of animals, including designing balanced diets, constructing stimulating habitats, and providing optimal medical care. Learn about the Zoo's conservation programs, explore underground tunnels behind the new coral reef, visit the kitchens where keepers prepare diets, and tour the green houses which replenish vegetation for habitat collections. (Offered in cooperation with the Minnesota Zoo. Limited to 20)

Spec Term, ★Sec 50, Sa, 9 a.m.-12:30, July 17 and 24 (2 meetings), Minnesota Zoo, 13000 Zoo Boulevard, Apple Valley (meet in lobby). *No late fee through July 9.*

(Steve Hage is the conservation education specialist at the Minnesota Zoo and a doctoral candidate in conservation biology at the University of Minnesota)

The Practical Scholar summer course offerings:

University Access

PSch 0606 APPLYING TO GRADUATE SCHOOL. No credit, \$12 (age 62, \$10.80).

Applying to graduate school takes early planning (many application deadlines are six months or more before the term begins). If you are considering graduate school as a possible next step in your career/educational plan, learn more about how the admission process works, when and where to apply, and how to put together an effective application. Includes time for questions. (Limited to 45)

Spec Term, ★Sec 51, Sa, 9-10:30 a.m., June 12 (1 meeting), Arch 30. *No late fee through June 4.*

(Dennis Clayton, Ph.D., is assistant to the dean of the Graduate School at the University of Minnesota)

PSch 0607 FINANCING GRADUATE SCHOOL. No credit, \$11 (age 62, \$9.90).

Pursuing an advanced degree can be expensive. Early planning can be important in successfully financing your graduate education. Find out what types of aid and financial support are available to graduate students including loans, grants, scholarships, fellowships, and assistantships. Includes time for questions. (Limited to 40)

Spec Term, ★Sec 52, Sa, 11 a.m.-12:15, June 12 (1 meeting), Arch 15. *No late fee through June 4.*

(Rose Miskowiec is financial aid counselor for graduate and professional students at the University of Minnesota. Alison Skoberg is associate director, Graduate School Fellowship Office, University of Minnesota)

PSch 0608 ASSESSING MATH SKILLS FOR THE GRE AND GMAT FOR GRADUATE ADMISSIONS EXAMS. No credit, \$30 (age 62, \$27).

This three-hour clinic is designed to diagnose your readiness to take the mathematics portion of the Graduate Record Examination (GRE) and the Graduate Management Admission Test (GMAT). It will provide a description of the mathematics portions of both tests, a self-scored test of your mathematics skill levels as they relate to the GRE and GMAT, and information on what to do next with regard to studying for the tests (what to study and classes to take to help prepare for the tests). (Limited to 30)

Spec Term, ★Sec 52, W, 6-9, July 28 (1 meeting), AmundH 158. *No late fee through July 21.*

(Barbara Clothier is the mathematics counselor at Macalester College. She is also an instructor of mathematics and statistics. Her research interests are in educational psychology and developmental mathematics education)

PSch 0609 REVIEWING MATH FOR THE GRE OR GMAT. No credit, \$116 (age 62, \$104.40). *Includes study materials.*

Designed to prepare you for the mathematics portions of the Graduate Record Examination (GRE) and the Graduate Management Admission Test (GMAT). The course is intended for people who need to brush up on their math skills and who would like some guidance and practice in solving the types of problems encountered in the GRE and GMAT. Topics covered will include material from arithmetic, algebra, and geometry, and word problems from these areas. Students needing an extensive review of these subjects should consider taking PSch 0661, 0662, and/or 0663. Materials distributed at the first class meeting. (Limited to 30)

Spec Term, ★Sec 52, M, 6-8:30, Aug. 9-30 (4 meetings), AmundH 120. *No late fee through Aug. 2.*

(Barbara Clothier is the mathematics counselor at Macalester College. She is also an instructor of mathematics and statistics. Her research interests are in educational psychology and developmental mathematics education)

PSch 0610 PREPARING FOR THE GRE. No credit, \$192 (age 62, \$172.80). *Includes study materials.*

Become familiar with the various types of verbal, quantitative, and analytical questions presented on the Graduate Record Examination (GRE) General

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Test. In addition to learning test-taking strategies, participants will work with test simulation exercises on reading comprehension, antonyms, analogies, sentence correction, problem solving, quantitative comparison, data interpretation, and analytical/logical reasoning. Materials especially prepared for this seminar format distributed at the first class session. (Limited to 40)

Spec Term, ★Sec 53, Th, 5:30-9:30, Aug. 12-Sept. 2 (4 meetings). AmundH 156. *No late fee through Aug. 5.*

(Instructor, to be assigned, will be a staff member in the Learning and Academic Skills Center at the University of Minnesota)

PSch 0613 PREPARING FOR THE LSAT. No credit, \$192 (age 62, \$172.80). *Includes study materials.*

Learn test-taking strategies and practice working with the various types of questions presented on the Law School Admissions Test (LSAT). Review logical and verbal reasoning, sharpen reading comprehension, practice solving analytical reasoning problems, brush up on parts of speech, word usage, and proper sentence structure, and learn a system to use to generate ideas for and complete the required 30-minute essay. After being introduced to proven methods for dealing with each of the question types, work with test simulation exercises. Materials especially prepared for this seminar format distributed at the first class session. (Limited to 40)

Spec Term, ★Sec 50, W, 5:30-9:30, Aug. 25-Sept. 22 (4 meetings—no class Sept. 15), AmundH 156. *No late fee through Aug. 18.*

(Instructor, to be assigned, will be a staff member in the Learning and Academic Skills Center at the University of Minnesota)

PSch 0620 GRAMMAR REFRESHER. No credit, \$72 plus \$3 special fee. Total \$75 (age 62, \$64.80 plus \$3 special fee. Total \$67.80).

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? Designed for people who had a strong background in grammar (however many years ago), but who would now like to review basic skills. It is intended for those considering returning to the classroom, those already in school and having problems with writing, and those who would like a refresher for personal correspondence. Review grammar, punctuation, sentence structure, and common problem areas. 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 52, W, 9-11 a.m., June 23-July 21 (5 meetings), MacP Annex 2. *No late fee through June 16.*

(Jan DeNoble has taught classes and seminars for the University of Minnesota, government agencies, and private industry)

PSch 0662 ELEMENTARY ALGEBRA. No credit, \$160 (age 62, \$144).

Instruction in elementary algebra including signed numbers, solving equations, graphing, factoring, rational expressions, roots, and radicals. Option of taking self-graded quizzes to monitor progress during class. Prepares students for Intermediate Algebra (PSch 0663 or GC 0625). (Limited to 30)

Spec Term, ★Sec 51, W, 6-7:45, June 16-Aug. 25 (11 meetings), AmundH 120. *No late fee through June 9.*

(Douglas Robertson is a professor in the General College at the University of Minnesota. He was one of the recipients of the 1989-90 Morse-Alumni Award for Outstanding Contributions to Undergraduate Education as well as the 1990 CEE Distinguished Teaching Award. His research interests are in developmental mathematics education)

Human Development

PSch 0802 ENHANCING SELF-ESTEEM. No credit, \$58 (age 62, \$52.20).

Self-esteem is a feeling or image that we have of ourselves that fluctuates over time and across situations. Identify the thoughts, feelings, and behaviors that affect your sense of self and your relationships with others. Learn specific steps for increasing self-acceptance, developing confidence, setting and achieving goals, and overcoming barriers to change through lectures, discussions, and group activities. Examine the tools for building and maintaining a positive self-image. This course is designed as an educational experience, not a therapy group. (Limited to 20)

Spec Term, ★Sec 52, Th, 9:30-11:30 a.m., June 10-July 1 (4 meetings), Lutheran Church of the Good Shepherd, 4801 France Ave. South, Edina (park in lot south of Church and enter through doors from parking lot). *No late fee through June 3.*

(Jill Flower is a licensed psychologist who received her doctoral degree from the University of Minnesota. In addition to teaching, she maintains a private therapy practice)

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Noncredit Courses

PSch 0829 CAREER DECISIONS: STRATEGIES FOR CHANGE. No credit, \$96 plus \$10 special fee. Total \$106 (age 62, \$86 plus \$10 special fee. Total \$96).

Take the first step toward assessing your job, your goals, and yourself in relation to your career. Consider values, job satisfaction, job stress, and person-environment fit as key elements of the decision to stay where you are or to make a change. Explore educational training opportunities by learning ways to explore career alternatives. An opportunity to take the Strong Interest Inventory and the Myers-Briggs Type Indicator, two vocational assessment inventories. (Limited to 30)

Spec Term, ★Sec 53, W, 6-8, June 16-July 21 (6 meetings), NCCE 229, Schaefers. *No late fee through June 9.*

Spec Term, ★Sec 54, W, 6-8, June 30-Aug. 4 (6 meetings), NCCE Library, Huck. *No late fee through June 23.*

(Kate Schaefers works with the Career Transition Center at the University of Minnesota and Christina Huck, Ph. D., is a licensed psychologist. Both are career counselors who have worked with university students and other adults, and have taught career planning classes and job search workshops)

... Etcetera

PSch 0906 INVESTMENTS AND PERSONAL FINANCIAL PLANNING. No credit, \$60 (age 62, \$54).

Cover 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 51, W, 6-8:30, June 16-30 (3 meetings), Walker Library, 2880 Hennepin Ave. South, Mpls. *No late fee through June 9.*

(Jennifer Fogg, M.B.A., is a registered investment advisor with MTI Financial Services of Edina)

PSch 0930 BUILDING A LEISURE IDENTITY: PERSONAL GROWTH THROUGH PLAY. No credit, \$22 (age 62, \$19.80).

Building a "career identity" is given a high priority by today's society. Developing a "leisure identity" is often ignored or given only minimal attention and energy. The irony is that leisure can provide many of the benefits and the fulfillment that we look for from our jobs. In this workshop, examine both societal and individual outlooks on leisure, find out what prevents you from fully enjoying your leisure, and explore appropriate activities which may provide opportunities for your emotional, physical, intellectual, spiritual, and social growth.

Spec Term, Sec 51, Th, 6-9, June 17 (1 meeting), AmundH 158. *No late fee through June 10.*

(Barb Krantz is a licensed psychologist specializing in career counseling for adults at the University of Minnesota. She has special interests and expertise in "leisure counseling," an outgrowth of career/personal counseling emphasizing the role of leisure in promoting life balance and enhancing personal growth)

PSch 0935 RACEWALKING: AN INTRODUCTION TO WELLNESS. No credit, \$45 (age 62, \$40.50).

Racewalking, a low-impact aerobic sport suitable for people of all ages, serves as an introduction to the concept of wellness. Learn the importance of physical activity by learning the skill of racewalking. Includes a variety of activities, such as stretching, specific racewalking exercises, interval training on the track, and discussions about shoes and clothing. Designed for people of all levels of expertise, from those who wish to learn this new activity to those who may want to train for competition. (Limited to 15)

Spec Term, ★Sec 51, T, 6-8, June 15-29 (3 meetings), BFAB 285. *No late fee through June 8.*

(Mary Howell is an experienced kinesiology teacher as well as a coach and former member of the U.S. National Racewalking Team)

PSch 0956 YARD SMART: REDUCING YARD WASTES, MAINTENANCE, AND PLANT DISEASE. No credit, \$13 (age 62, \$11.70).

For the home gardener and landscaper, an introduction to landscaping and horticultural practices which can reduce yard waste and minimize labor through planning, plant selection, and planting methods. Includes common sense design concepts and watering, pruning, and fertilizing practices which can help you avoid problems with plant disease and insects, as well as discussion of reusing and recycling yard wastes (composting; selecting site, building, maintaining, and using). (Limited to 30)

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Spec Term, ★Sec 50, M, 6:15-8:15, June 21 (1 meeting), NCE 229. *No late fee through June 14.*

(Jack Porter is a landscape designer and consultant, and was formerly education coordinator for yard waste management, Minnesota Extension Service-Hennepin County)

PSch 0959 THE EXOTIC WORLD OF THE JAPANESE GARDEN. No credit, \$40 (age 62 and Arboretum members, \$36).

The intriguing and mysterious air of Japanese gardens is due to their complex nature. Learn about the strong influence of history and philosophy in the development of Japanese gardens plus the natural and man-made materials used to make the various types. Further understanding is cultivated through a slide show and by visiting several of these special gardens in the Twin Cities. After the second session, there is the option of ending the class at a Japanese restaurant for lunch. The cost for lunch is not included in course tuition. Admission fee to Arboretum waived with course registration receipt. (Offered in cooperation with the Minnesota Landscape Arboretum. Limited to 25)

Spec Term, ★Sec 50, Th, 9 a.m.-12, June 17 and 24 (2 meetings), Minnesota Landscape Arboretum, Classroom 2, 3675 Arboretum Drive, Chanhassen. *No late fee through June 10.*

(Shirley Mah Kooyman, director of volunteers at the Minnesota Landscape Arboretum, is a botanist and master gardener)

PSch 0962 WEEDS: EVOLUTION AND PRACTICAL CONTROL. No credit, \$40 (age 62, \$36).

Where do the weeds in our gardens come from and why can't we seem to get rid of them? Understand how weeds evolve by examining living examples, review environmental concerns in weed control, and learn how to apply practical weed control methods in your home garden. Includes short walks on campus to learn common weed identification. (Limited to 25)

Spec Term, ★Sec 50, W, 6:15-8:15, June 16-30 (3 meetings), HrG 172, StP Campus. *No late fee through June 9.*

(Neil O. Anderson is a lecturer and post-doctoral research associate in the Department of Horticultural Science at the University of Minnesota. His research interests include weed evolution and control, with recent study of purple loosestrife)

PSch 0963 HERBACEOUS PERENNIAL PLANTS: IDENTIFICATION AND USE IN THE GARDEN. No credit, \$102 (age 62, \$91.80).

Herbaceous perennials are a beautiful and versatile group of garden plants. Focus is on identification, cultural requirements, and landscape use of hardy, summer-blooming perennials. Learn about plants and design in the field; each lecture is held at a local public or private garden or nursery, enabling participants to see the many ways that perennials can be used to enhance the home landscape. Class meets twice monthly throughout the summer in order to view the largest possible selection of plants. (Limited to 20)

Spec Term, ★Sec 50, T, 6-8:30, June 15, 22, July 6, 13, August 24, 31 (6 meetings—first class meets in NCE Library). *No late fee through June 8.*

(C. Colston Burrell is a landscape designer, consultant, writer, and photographer. He has an M.S. in horticulture and is currently a graduate student in landscape architecture)

PSch 0966 PRAIRIE GRASSES AND WILDFLOWERS: PROPAGATION AND LANDSCAPE USE. No credit, \$40 (age 62, \$36).

Grow some of Minnesota's natural heritage in your garden. The prairie grasses and wildflowers of Minnesota are well suited to a sunny garden. Learn where to obtain these native plant materials and the techniques and supplies needed for home propagation. Also includes discussion of the implications of natural plant associations for the cultural use of native plant materials. One session is a walking tour through a constructed demonstration prairie. Course text is Rodale's *Illustrated Encyclopedia of Perennials*. (Limited to 22)

Spec Term, ★Sec 50, T, 6:15-8:15, July 13-Aug. 3 (3 meetings—no class July 27), AlderH 415, StP Campus. *No late fee through July 6.*

(Julia Bohnen is a master's degree candidate in the Department of Horticultural Science at the University of Minnesota. Her thesis research involves the production of native Minnesota plants from seed)

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RESEARCH EXPLORATIONS

Research Explorations (REX)

What is the Research Explorations Program?

Research Explorations (REX) offers the opportunity for public participation in field and laboratory research projects of University of Minnesota faculty.

Research projects for 1993 have been scheduled throughout Minnesota as well as at other U.S. and international sites. Local projects deal with the environment, natural resources, wildlife and resource management, social and health issues, and other topics. One REX archaeological project takes place in Germany.

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 pro-**

gram should call (612) 624-5092 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, or 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

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* Tuition definitions of Resident and Non-resident explained on page 9.

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.

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 con-

ditions 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 most 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 Projects for Summer 1993

REX 0105 THE IMPACT OF SOIL FERTILITY ON CROP PRODUCTIVITY. *Dates:* summer 1993; to be arranged. *Contribution:* \$150.

Vegetable growing is gaining importance in Minnesota, and soil fertility research to expand production of crops such as potatoes, field corn, and soybeans is the core of this project. REX volunteers will participate in field work, including the collection of soil and tissue samples for nitrogen analysis, prepare samples in the lab, and conduct analysis; water samples will also be collected for nitrate analysis. If working at the appropriate time, REX volunteers will also be involved in planting and harvesting plots and could become involved in evaluating land application of various waste products such as solid waste compost, yard waste, incinerator ash, and sewage sludge incinerator ash on crop productivity. Some day trips may be expected. Required participant qualification: willingness to work outside in most weather conditions. Project leader is Carl Rosen, associate professor, Department of Soil Science. Location: primarily St. Paul campus. *Call 624-5092 for registration information and an application form.*

* Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Noncredit Courses

REX 0112 MANAGEMENT AND GENETIC PRACTICES WHICH INFLUENCE SHEEP PRODUCTION. *Dates:* to be arranged. *Contribution:* \$150.

The objective of this project is to provide the student with the hands-on learning experience of working with sheep as an animal model. Activities include birthing, identification, shearing, feeding, record evaluation, and experimental data collection. REX volunteers will gain first-hand experience in raising sheep and the opportunity of conducting their own research project relating to feeding, reproduction, and genetic engineering. Required participant qualifications: a willingness to learn, keen observation skills, ability to work with peers, and a love for animals and their welfare. Project leader is Charles Christians, professor, Department of Animal Science. Location: Beef Barn, St. Paul campus. *Call 624-5092 for registration information and an application form.*

REX 0119 NEUROBIOLOGY OF PAIN AND OPIATES. *Dates:* to be arranged. *Contribution:* \$150.

In order to develop new approaches toward developing analgesic agents without addictive properties, this research project employs a variety of techniques to determine the chemistry, anatomy, and pharmacology of pain transmission. REX volunteers will work both with a team member and independently as they monitor the analgesic activity of various compounds in laboratory animals. General knowledge of biology and/or biochemistry and a desire to work with lab animals that are clean and friendly required. Project leader is Alice A. Larson, professor, Department of Veterinary Pathobiology. Location: Animal Science/Veterinary Medicine Building 217, St. Paul campus. *Call 624-5092 for registration information and an application form.*

REX 0121 IMPACT OF AGRICULTURAL CHEMICALS ON GROUNDWATER. *Dates:* to be arranged; daily work for two to three weeks. *Contribution:* \$150.

Developed in conjunction with the President's Initiative on Water Quality, this ongoing project is part of a large national program. Working with the project's leader and associate scientist, REX volunteers will take water and soil samples from one or more of the project's four major sites (one in Westport in Pope County; one near Princeton in Sherburne County; one just east of Rochester; and a fourth in Waseca). They will then assist in the analysis of collected samples. Analysis based on this research has already affected public policy on agriculture and the environment. Volunteers will also participate in other group activities, including discussion of pertinent environmental issues. Project leader is J. L. Anderson,

professor, Department of Soil Science. Location: Pesticide Analytical Lab, St. Paul campus, and various field locations. *Call 624-5092 for registration information and an application form.*

REX 0123 THE INFLUENCE OF NEUROTENSIN ON GASTRIC FUNCTION. *Dates:* to be arranged. *Contribution:* \$150.

Using standard surgical procedures, a gastric cannula and a strain gauge transducer will be implanted in domestic turkeys. After the turkeys recover, neurotensin is infused, gastric secretions collected, and gastric motility monitored to determine the effects of neurotensin on gastric function. REX volunteers will assist in surgery, care for turkeys, and perform experiments. As a result of participating in the project, volunteers will gain an understanding of experimental design, surgical procedures, gastric physiology, and neurotensin functions. Required participant qualifications: organizational ability, dexterity, willingness to work. Project leader is Gary Duke, professor, Department of Veterinary Pathobiology. Location: Animal Science/Veterinary Medicine Building, St. Paul campus. *Call 624-5092 for registration information and an application form.*

REX 0129 ISOLATION AND PURIFICATION OF CHICKEN ANTIBODIES. *Dates:* to be arranged. *Contribution:* \$150.

Working with the project leader and other researchers, REX volunteers in this project will assist in isolating tubulin antibodies from chicken eggs and partially purifying them so that they can be used in studies of how plants use different forms of tubulin during development. The goal is to get the chicken antibodies into a form that is useful for microscopy and biochemical assays. Volunteers will precipitate and affinity-purify antibody proteins from egg yolks using routine procedures established in the lab. Knowledge of elementary chemistry required. Project leader is Sue Wick, associate professor, Department of Plant Biology. Location: St. Paul campus. *Call 624-5092 for registration information and an application form.*

REX 0130 STRESS EFFECTS ON LIVING PLANT CELLS. *Dates:* 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. Limited to two volunteers. Project leader is Eduard Stadelmann, professor, Department of Horticultural Science. Location: Alderman Hall 228, St. Paul campus. *Call 624-5092 for registration information and an application form.*

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REX 0136 MOVEMENT OF PESTICIDES TO GROUNDWATER. *Dates:* to be arranged. *Contribution:* \$150.

There is an on-going multiple-investigation study of the movement of agricultural chemicals (pesticides and nutrients) to groundwater in response to farming practices. Using research from that study, this REX project focuses on the movement and behavior of pesticides to understand their long-term environmental impact. The emphasis is on sampling, analysis, and interpretation of field samples. The REX volunteer will participate in collection of water samples for pesticide analysis, preparation of samples for analysis, final instrumental analysis of samples, and data evaluation. The volunteer should have some knowledge and experience in a chemistry laboratory and an interest in environmental sciences. Project leader is Paul D. Capel, assistant professor, Department of Civil and Mineral Engineering. Location: Gray Freshwater Biological Institute, Navarre, Minn. Call 624-5092 for registration information and an application form.

REX 0137 MARKETING MINNESOTA SOYBEANS: A SURVEY TO INVESTIGATE EFFECTS OF KNOWLEDGE AND ATTITUDES OF PROFESSIONALS ABOUT SOY FOODS ON DIETARY ADVICE PROVIDED FOR THEIR CLIENTELE. *Dates:* to be arranged. *Contribution:* \$150.

A survey will be conducted of a random sample of professionals who give dietary advice to others (dietitians, nutritionists, nurses, home economics teachers, and others) to investigate their knowledge, attitudes, and awareness of soy foods and soy-derived food ingredients. Their advice to clients regarding these foods will also be studied. The REX volunteer will work on a report summarizing and interpreting survey data (including computer graphics) to present numeric data and statistics used to determine importance of data from crosstabulations (stats will already be calculated). An ability to use Wordperfect 5.0 or 5.1 is required; some experience with graphics programs would be helpful. Project leader is Elaine H. Asp, associate professor, Department of Food Science and Nutrition. Location: St. Paul campus. Call 624-5092 for registration information and an application form.

REX 0138 EFFECT OF DIETARY PROTEIN (LYSINE) INTAKE ON MAMMARY DEVELOPMENT, MILK PRODUCTION, AND SUBSEQUENT REPRODUCTION IN GILTS. *Dates:* to be arranged. *Contribution:* \$150.

The purpose of this project is to determine the effect of Lysine intake during pregnancy or mammary development, and to determine the interacting effects

of protein levels during pregnancy and lactation on milk production and subsequent reproduction of sows. REX volunteers will be involved in feeding animals, taking blood samples, and dissecting mammary tissue. Participants must be willing to participate in animal research. Project leader is J.E. Pettigrew, professor, Department of Animal Science. Location: St. Paul campus. Call 624-5092 for registration information and an application form.

REX 0139 PAPER RECYCLING TECHNOLOGY. *Dates:* to be arranged. *Contribution:* \$150.

In the Department of Forest Products, there is an ongoing research program on the physical changes in paper properties caused by paper recycling and development of technology to reduce the adverse effects of recycling on paper quality. Responsibilities of REX volunteers in this research include sample collection, laboratory testing, and data analysis. Some lab and/or computer experience would be helpful. Project leader is Hank Wells, associate professor, Department of Forest Products. Location: St. Paul campus. Call 624-5092 for registration information and an application form.

REX 0142 EVALUATING GRAPES FOR GROWING IN MINNESOTA. *Dates:* to be arranged. *Contribution:* \$150.

Working with members of the research team, REX volunteers will participate in this project to learn about the feasibility and difficulties of growing grapes in a cold climate. Activities include planting, pruning, and training grapevines; harvesting fruit, winemaking, collecting data on vine performance for disease resistance and fruit quality; and assisting with hybridization. The project includes both grape breeding and viticulture trials pertinent to developing grapes as a crop for cold climates. Required participant qualification: willingness to work outdoors under most conditions. Project leader is James Luby, associate professor, Department of Horticultural Science. Location: Horticultural Research Center, Excelsior, Minn. Call 624-5092 for registration information and an application form.

REX 0147 REDUCING THE NEED FOR PESTICIDES: DEVELOPMENT OF INSECT AND DISEASE RESISTANT VEGETABLES. *Dates:* to be arranged. *Contribution:* \$150.

European corn borer, fungal leaf rust, and maize dwarf mosaic virus are serious pest problems on sweet corn. One focus of this project is to investigate resistance and other traits of populations and families genetically segregating for resistance to these pests. In other experiments green peas varying in resistance to a soil-borne fungal pathogen will be evaluated and selected via plant breeding experiments in the field

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and laboratory. REX volunteers will have an opportunity to assist in inoculum preparation, plant inoculation and infestation, selection of resistant plants, plant hybridization, and data collection. Required participant qualification: knowledge of biology or plant biology; ability to drive a car; reliability. Project leader is David W. Davis, professor, Department of Horticultural Science. Location: St. Paul campus with possible trip(s) to the Southern Experiment Station, Waseca; the Sand Plain Experimental Farm, Becker, Minn.; and/or the Horticultural Research Center, Chanhassen. Call 624-5092 for registration information and an application form.

REX 0148 MICROBIAL PURIFICATION OF SOILS AND GROUNDWATER. *Dates:* to be arranged. *Contribution:* \$150.

Some natural purification of pollutants in groundwater and soils can occur through microbial oxidation under certain conditions. In this project, the extent and rate of biodegradation of selected organic pollutants in water and in the presence of soil are measured, with the purpose of demonstrating sound clean-up procedures. The REX volunteer will set up and operate a series of manometric biochemical oxygen demand tests in existing apparatuses and then interpret and model data. Some understanding of chemistry is required. Project leader is Walter J. Maier, professor, Department of Civil and Mineral Engineering. Location: Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0149 INSECT BEHAVIOR: AN APPROACH TO DETERMINING THE INHERITANCE OF HOST PLANT RESISTANCE. *Dates:* to be arranged. *Contribution:* \$150.

Preliminary reports indicate that European corn borer larvae behave differently on resistant versus susceptible corn plants. These behavioral differences may lead to 1) understanding the cause(s) of resistance, 2) understanding of how resistance is inherited, and 3) improved methods of breeding resistant hybrids. Careful observation of insect behavior on resistant and susceptible greenhouse-grown plants should provide interesting data. REX volunteers will be involved in infesting plants with larvae, recording insect behavior and degree of plant damage, and analyzing and interpreting data obtained. Required participant qualifications: dexterity in manipulating fragile larvae, keen observational skills, tenacity, and patience. Project leader is David W. Davis, professor, Department of Horticultural Science. Call 624-5092 for registration information and an application form.

REX 0150 INSECT POLLINATION IN PRAIRIES. *Dates:* June 30-Sept. 30, 1993; five days a

week; weeks to be arranged. *Contribution:* \$150.

Compare insect populations in two types of prairies—virgin prairies and planted restored prairies. The purpose of this study will be to determine if plants in the restored prairie areas are being adequately pollinated. REX volunteers will observe and, in some cases, collect insects as they pollinate flowers; volunteers will also record numbers of plants and their insect visitors. Volunteers must be comfortable working with insects and able to tolerate normal summer weather. Project leader is Catherine Reed, research associate, Department of Entomology. Location: nature preserve in Twin Cities area. Call 624-5092 for registration information and an application form.

REX 0152 THE PURPLE WARTYBACK: LIFE HISTORY OF A RARE FRESHWATER MUSSEL. *Dates:* May through mid-August 1993; schedule to be arranged. *Contribution:* \$150.

Populations of purple wartyback (*Cyclonaias tuberculata*), a freshwater mussel, have declined throughout much of their historic range. In Wisconsin it is listed as a threatened species. Most freshwater mussels require a host organism to complete their life cycle, and effective management to rehabilitate the purple wartyback includes knowing its host. Laboratory tests will be conducted to determine the organism(s) capable of serving as host(s) for this mussel. Hosts will be determined by exposing fish to purple wartyback glochidia (larval mussels) in the laboratory and examining the test fish weekly for four weeks, during which time suitable fish hosts will produce juvenile mussels. Volunteers are needed to collect fish from the field, hold and feed the fish in the laboratory, inoculate fish with larval mussels, and look for juvenile mussels in the bottoms of aquaria. At the end of the experiment, researchers should know which fish are capable of metamorphosing purple wartyback glochidia into juveniles, thus aiding in the rehabilitation of this threatened species. Required participant qualifications: enthusiasm and willingness to learn. Knowledge of aquarium maintenance, fish net handling, and familiarity with a dissecting microscope are all skills that would be helpful but can be learned on the project. Project leader is Mark Hove, senior laboratory technician, Department of Fisheries and Wildlife. Location: St. Paul campus. Call 624-5092 for registration information and an application form.

REX 0161 CHARACTERIZATION OF GROWTH FACTOR(S) SECRETED BY A MACROPHAGE CELL LINE OF CHICKENS. *Dates:* to be arranged. *Contribution:* \$150.

The primary goal of this project is to purify and characterize the factors secreted by a macrophage cell

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line. Preliminary observations suggest that a factor released by this cell line stimulates the DNA replication of a transformed T-cell line. Since this is a transformed cell line, the factor may be important in the maintenance and growth of this line. The REX volunteer will grow and maintain cell cultures, prepare batches of cell culture supernatant fluid, assay for biological activity using cell proliferation assay, and purify protein from cell culture fluids. A basic understanding of animal biology or microbiology is required; some lab experience would be helpful. Project leader is J. M. Sharma, professor, Department of Veterinary Medicine. Location: St. Paul campus. *Call 624-5092 for registration information and an application form.*

REX 0200 AN INTERPRETATIVE HISTORY OF DULUTH. *Dates:* to be arranged. *Contribution:* \$150.

This project is part of an ongoing effort at developing a book-length history of the city of Duluth with emphasis on the process of democratization by which the various immigrant communities in Duluth won a place in the economic, political, and cultural life of the city. The ultimate aim is to publish such a book; the project at present remains in the research phase. The current research work has received financial support from the Minnesota Historical Society and from the Center for Urban and Regional Affairs of the University of Minnesota. Supporting research has also been provided by a student in the Department of Philosophy working on a UROP grant from the University of Minnesota. REX volunteers will be involved in primary historical research, specifically on the histories of churches, fraternal societies, labor unions, and businesses that formed the institutional pillars of the various ethnic communities. There are also some foreign language newspapers yet to be studied, and also some key events such as the organization of political parties. The specific topic upon which a volunteer would work would be up to the volunteer. Good reading skills and respect for the truth are the only skills required. Project leader is Richard Hudelson, adjunct professor, Department of Philosophy. Location: Duluth libraries and other institutions. *Call 624-5092 for registration information and an application form.*

REX 0209 KELHEIM: ORIGINS OF AN IRON AGE CITY. *Dates:* June 29-July 10, 1993. *Contribution:* expenses to be determined plus airfare.

University of Minnesota teams under the direction of Peter Wells have, since 1987, recovered large quantities of archaeological material from the Late Iron Age (200-50 B.C.) urban settlement at Kelheim in Bavaria, Germany. This summer Wells and his

team will analyze the sherds of pottery, animal bones, iron implements, bronze and glass ornaments, and Celtic coins found thus far in an effort to understand the character of the community and the lives of the people who lived there 2,000 years ago. Working in the Kelheim Museum, REX volunteers will catalog, label, sort, and classify artifacts; interspersed with this work will be discussions about the nature of archaeological research and the use of prehistoric archaeology as a way of teaching about human cultural development and as background to history. Field trips to other excavation sites and museums will also be included. Required qualifications: curiosity, good observation skills, capacity to handle details. Project leader is Peter S. Wells, professor, Department of Anthropology. Location: pre-trip seminar, Minneapolis campus; museum field research, Kelheim, Bavaria, Germany. *Call 624-5092 for registration information and an application form.*

REX 0234 MISSIONARIES AND THE CONQUEST OF HONDURAN INDIANS. *Dates:* 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 Spanish is required. Academic credit may be available through directed study. Limited to one volunteer. Project leader is John Weeks, professor, Humanities/Social Sciences Libraries, and adjunct faculty, Department of Anthropology and the Latin American Studies program. Location: Wilson Library 5, Minneapolis campus. *Call 624-5092 for registration information and an application form.*

REX 0241 CULTURAL DIVERSITY IN THE WORKPLACE. *Dates:* to be arranged. *Contribution:* \$150.

How are local and national organizations assessing their future needs with respect to cultural diversity? REX volunteers will assist in gathering pertinent information. Good communication and library research skills are required. Appreciation of cultural diversity, statistical data analysis skills, and familiarity with Macintosh word processing useful. Project leader is Rosita Albert, associate professor, Department of Speech-Communication. Location: various sites. *Call 624-5092 for registration information and an application form.*

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REX 0243 NATIVE AMERICAN MYTH BUSTING IN AMERICAN HISTORY. *Dates:* to be arranged; flexible schedule. *Contribution:* \$150.

The goal of this project is to produce an article, and possibly a teachers manual, detailing specific facts, narratives of incidents, and outlines of discussions designed to counter commonly held assumptions about Native Americans. REX volunteers will do historical research to find the answers to specific questions provided by the project leader and cite sources of all information. Project leader is David L. Ghere, assistant professor, General College. Location: Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0244 GENDER ISSUES IN AGRICULTURAL AND DEVELOPMENT ECONOMICS. *Dates:* to be arranged. *Contribution:* \$150.

Analytical models used in agricultural and development economics research, planning, and project preparation, particularly in developing countries, do not, for the most part, take differences in gender roles into account. The goal of this project is to adapt the models to explicitly consider gender. REX volunteers would conduct a review of the literature, participate in small workshops, and write. Volunteers will gain exposure to a rapidly developing and recent field in economics—gender bias of neoclassical economic theory. Required participant qualifications: good literature review skills and excellent reading for content skills. Project leader is Delane Welsch, professor, Department of Agriculture and Applied Economics. Location: St. Paul campus. Call 624-5092 for registration information and an application form.

REX 0245 ATTITUDES TOWARD AND USES OF SEXUALLY EXPLICIT MATERIALS IN THE UNITED STATES, CZECHOSLOVAKIA, THE NETHERLANDS, AND THE UNITED KINGDOM. *Dates:* to be arranged. *Contribution:* \$150.

Researchers compare cross-cultural attitudes of (1) health and mental health professionals and (2) clients seeking help for sexual problems toward sexually explicit materials of various kinds. Therapeutic uses of such materials will also be explored. REX volunteers, working independently and with other members of the research team, will help design questionnaires; collect data; assist with data preparation, cleaning, and analysis; and help write scholarly articles for journals. Required participant qualifications: ability to pay attention to detail, willingness to help recruit potential subjects, and ability to work collaboratively with a research team. Project leader is Bean Robinson, psychologist, Program in Human Sexuality, and assistant professor,

Department of Family Practice and Community Health. Location: Minneapolis. Call 624-5092 for registration information and an application form.

REX 0246 ASSESSMENT PROTOCOL FOR EVALUATION OF THE SEVERITY OF SEXUAL ABUSE. *Dates:* to be arranged. *Contribution:* \$150.

The goal of this project is the development of an assessment tool for mental health clinicians to use in evaluating clients with a history of sexual abuse. A literature search will be conducted to identify specific factors about abuse such as amount of physical force, harm, number of abuse incidents, duration of abuse, type of abuse, number of perpetrators, etc. A REX volunteer is needed to help review the literature; design the clinical instrument; assist with data collection, preparation, and analysis; and assist with writing (final product will be a journal article). Required participant qualifications: attention to detail; good reading, comprehension, and analytical skills; and a willingness to help develop a project that is just beginning and not completely focused. Clinical experience would be helpful. Project leader is Bean Robinson, psychologist, Program in Human Sexuality, and assistant professor, Department of Family Practice and Community Health. Location: Minneapolis. Call 624-5092 for registration information and an application form.

REX 0250 COMPUTER SIMULATIONS OF NEW STATISTICAL ESTIMATORS IN ECONOMETRICS. *Dates:* minimum commitment of two months; flexible schedule arranged. *Contribution:* \$150.

Recently, many new statistical procedures have been developed in econometrics and their asymptotic properties are being investigated. While the theoretical results are useful, those results are confined to analyzing the properties of estimators when sample sizes grow large. Researchers would like to examine the properties of the estimators in a finite, small sample. A REX volunteer with FORTRAN programming experience (or high motivation) is being sought to provide computer programming for this project. Project leader is Hidehiko Ichimura, assistant professor, Department of Economics. Location: Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0252 SOURCE, PRESENTATION, AND RETAIL PRICING OF FRESH VEGETABLE GREENS. *Dates:* June 1-Sept. 1, 1993; flexible schedule arranged. *Contribution:* \$150.

Summer sources and retail prices of fresh salad greens are unstable. In the Twin Cities metropolitan area this is not well understood nor appreciated. As highly nutritious vegetables like greens are realizing an increase in interest and demand, this project seeks

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greater knowledge of the variables affecting May to September sourcing, presentation, and pricing structure at various types of retail outlets. This information would be useful in advising potential growers and in teaching. REX volunteers will conduct interviews, visit retail outlets and growers, evaluate product quality, determine prices and stability of prices, estimate product losses, and document product presentation methods. Effective communications skills and the ability to drive a car are required. Project leader is David W. Davis, professor, Department of Horticultural Science. Location: Twin Cities area and surrounding counties. *Call 624-5092 for registration information and an application form.*

REX 0260 IMPACT OF SEXUAL ABUSE TREATMENT ON FAMILY FUNCTIONING. *Dates:* to be arranged. *Contribution:* \$150.

Working with project staff, REX volunteers will accompany interviewers to meetings with family members at homes or agencies to evaluate the impact of child sexual abuse treatment on family functioning. This evaluation method has been implemented as a regular part of the evaluations of three clinical treatment programs in the Twin Cities. In addition to the interviews, volunteers will also participate in data management procedures. Required participant qualifications: interpersonal skills; basic computer skills would be very helpful (speed not an issue). Project leader is James W. Maddock, associate professor, Department of Family Social Science. Location: St. Paul campus, agencies, and family homes. *Call 624-5092 for registration information and an application form.*

REX 0261 RELATIONSHIPS IN ADOPTIVE FAMILIES. *Dates:* to be arranged. *Contribution:* \$150.

The purpose of this study is to examine variations in openness in adoptive family relationships and the consequences of contact between the adoptive and birth parents for the adopted child, the adoptive parents, and the birth mother. Data from over 190 adoptive families have been collected and interviews are being examined to address issues relating to self-concept and relationship development. In a team that works closely together, REX volunteers will participate in a variety of activities: coding of data from interviews with parents, children, or birth mothers; data entry; maintenance of a computerized data base bibliography; and data analysis. Required participant qualifications: interest in research, ability to work both independently and with small groups, willingness to participate in a variety of project roles. Project leader is Harold D. Grotevant, professor, Department of Family Social Science. Location: McNeal Hall, St. Paul campus.

Call 624-5092 for registration information and an application form.

REX 0262 SPATIALLY COORDINATED BEHAVIOR. *Dates:* six-month commitment; schedule arranged. *Contribution:* \$150.

Working with a research group, REX volunteers can work on this project concerned with the guidance of spatial behavior, ranging from how visual information is used by infants and toddlers to guide locomotion to how adult professionals use topographic maps to find their way in outdoor environments. Volunteers will help design and carry out behavioral psychological experiments on spatial behavior. Weekly meetings will be held with the whole research group, including REX volunteers. The ability to work well with others—both with research subjects and other members of the research group—is required. Project leader is Herbert L. Pick, professor, Institute of Child Development. Location: Minneapolis campus and field settings. *Call 624-5092 for registration information and an application form.*

REX 0264 YOUNG CHILDREN'S USE OF FRAMES OF REFERENCE IN A SEARCH TASK. *Dates:* to be arranged. *Contribution:* \$150.

This project is focused on collecting and analyzing experimental data from human research participants (3-year-olds). Children are brought in by their parents and participate in one of several tasks; in all tasks the child is to figure out what the rule is by which small toys have been hidden. The REX volunteer will help in all phases of the research: contacting and scheduling appointments with parents, testing children, and helping to analyze and interpret the resulting data in light of the extant research literature. The REX volunteer will gain practice in experimental design and implementation, from the conceptualization of a problem to the design of a means to test hypotheses about it to interpretation of the results. Some background in research methods and experience with young children are required. Project leader is Herbert L. Pick, professor, Institute of Child Development. Location: Institute of Child Development. *Call 624-5092 for registration information and an application form.*

REX 0265 COPING WITH CHRONIC ILLNESSES. *Dates:* to be arranged. *Contribution:* \$150.

The purpose of this project is to identify psychosocial predictors of psychological adjustment and treatment compliance among kidney transplant recipients, including coping strategies, control beliefs, and social support. Data are collected at 3, 6, and 12 months post-transplant via surveys and interviews. The impact of a chronic illness on care givers also is assessed. The REX volunteer would enter questionnaire data and

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interview patients and care givers in person and over the phone. Required participant qualifications: good interpersonal skills, interviewing skills, organizational skills. Project leader is Patricia Frazier, assistant professor, Department of Psychology. Location: Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0266 AN EXAMINATION OF CHILDREN'S STORIES OF EMOTIONAL EXPERIENCES.

Dates: to be arranged. *Contribution:* \$150.

Within the last few years, a number of cognitive appraisal theories of emotion have proposed that the assessments made by people in a given situation will determine the emotions that they will feel. Evidence based on research which has tested adults shows strong support for these theories. However, very little research has looked at children. The purpose of this project would be to examine what appraisals children consciously associate with different emotions. Testing these associations would require that children tell their own stories as well as listen to vignettes and identify the protagonists' emotions. The REX volunteer will assist with questionnaire design, visual aid creation and completion, collection of the newest articles addressing children and emotion, and final arrangements with the schools/centers where the research will be conducted. Required participant qualifications: knowledge and understanding of young children (ages 3 to 9), good listening skills, problem solving skills, creativity, and attention to detail. Project leader is Becky L. Omdahl, assistant professor, Department of Speech-Communication. Location: Minneapolis campus and possible off-campus sites. Call 624-5092 for registration information and an application form.

REX 0267 ELDER ROLE MODELS IN LONG-TERM CARE.

Dates: to be arranged. *Contribution:* \$150.

Through analysis of intensive life-history interviews, this project seeks to understand the experience of successful aging, particularly among fragile elders. Analysis will be based on Erikson's theory of life-cycle development as revised by Erikson, Erikson, and Kivnick (1986). Goals of the project include identifying the range of useful models of successful aging and earlier-life forerunners of successful aging. REX volunteers would review interview transcripts with the project leader and research assistant and enter coded data into computers. Required participant qualification: computer literacy. Project leader is Helen Q. Kivnick, associate professor, School of Social Work. Location: Minneapolis campus and volunteer's home. Call 624-5092 for registration information and an application form.

REX 0301 NUTRITION AND ORAL HEALTH OF THE ELDERLY.

Dates: 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. Limited to 6 volunteers. Project leader is Dr. Nelson Rhodus, research professor, Division of Oral Diagnosis and Radiology. Location: Moos Tower 7-536, Minneapolis Campus. Call 624-5092 for registration information and an application form.

REX 0302 BETTER HEALTH AT LOWER COST.

Dates: to be arranged. *Contribution:* \$150.

This project attempts to improve the quality of life for frail elderly people and reduce their need for expensive care in hospitals and nursing homes. The research team hopes to achieve this goal by screening home-dwelling elders and then providing the most frail elders with intensive interdisciplinary care to address their major health-related problems. REX volunteers will contact community agencies to arrange services for the patients as well as providing information, counseling, and transportation within University hospital buildings. Some data management may be included. Required participant qualifications: good interpersonal and communication skills; computer literacy. Project leader is Chad Boulton, professor, Department of Family Practice and Community Health. Location: Minneapolis campus and medical offices. Call 624-5092 for registration information and an application form.

REX 0303 TEMPORAL AND SPATIAL EXPRESSION OF GROWTH FACTORS IN REGENERATION.

Dates: to be arranged. *Contribution:* \$150.

This project seeks to identify cell dialogs/interactions leading to regeneration rather than scarring after injury. Experiments are conducted in vivo using a rat model. Tissue samples derived from control and treated animals are used to assess effects of experimental manipulations. Temporal and spatial distribution of growth factors used during regeneration will be evaluated by molecular (PCR) and histological (immunohistochem/in situ hybrid) methods. Comparisons to data acquired during aborted regeneration and in culture will enable those growth factors important for regeneration to be identified. This will extend understanding of regeneration and regulation in development. The REX researcher will participate in

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preparative activities (e.g., reagent preparation), assist in performing experiments and data collection, participate in data analysis, and attend lab meetings (at which ongoing research activities are discussed). Required participant qualifications: knowledge of basic aseptic (sterile) techniques, practical experience in preparing basic reagents (e.g., buffers), and familiarity with use of compound microscope. Project leader is Raymond E. Sicard, assistant professor, Department of Surgery. Location: Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0304 HEALTH AND REPRODUCTIVE HEALTH OF WOMEN IN AGRICULTURE.

Dates: fall 1993 (applications accepted during summer 1993). *Contribution:* \$150.

This project will survey the health and reproductive health status of women in agriculture with particular interest in the possible relationship between health problems and direct and/or indirect exposure to pesticides. The survey is designed to discover and describe lifestyles and activities that directly and indirectly expose women who are spouses of persons who apply pesticides. The REX volunteer will make site visits in rural Minnesota to interview study participants, verify questionnaire data, take photographs, and observe daily activities. The REX volunteer must have a genuine interest in and concern for persons who work in agriculture, and the ability to maintain neutrality in interviewing rural women regarding subjects of political and personal sensitivity. Project leader is Vincent F. Garry, associate professor, Department of Laboratory Medicine and Pathology. Location: various sites in Minnesota. Call 624-5092 for registration information and an application form.

REX 0305 NEURAL MECHANISMS OF HYPERALGESIA. *Dates:* to be arranged. *Contribution:* \$150.

This research team is currently studying the spinal neural mechanisms that contribute to nociception in rats. The goal of the present study is to determine whether excitatory amino acids (EAAs) or opiates can modulate hyperalgesia produced by intraplantar injection of capsaicin. The effects of intrathecally administered EAA receptor antagonists and opiates on behavioral measures of hyperalgesia will be explored. The REX volunteer will perform surgery in rats (under supervision), do behavioral testing, and perform statistical analyses using computer programs. No specific skills are required, but some background in life sciences would be helpful. Project leader is Donald A. Simone, assistant professor, Department of Psychiatry. Location: Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0306 CEREBELLAR NEURONS: CALCIUM CHANNELS. *Dates:* to be arranged. *Contribution:* \$150.

The purpose of this project is to identify and characterize the calcium channels in the different types of cerebellar neurons. The responsibilities of the REX volunteer will depend upon interest and pre-existing knowledge, and could include such activities as staining and identifying neurons, patch-clamp recording from neurons, and computer analysis of electrical signals. A sound understanding of biology is required; experience with computers or electronics or histology would be helpful. Project leader is W. Raabe, associate professor, Department of Neurology. Location: VA Medical Center, Minneapolis. Call 624-5092 for registration information and an application form.

REX 0307 CELL INTERACTIONS IN THE INITIATION OF MAMMALIAN MUSCLE REGENERATION. *Dates:* to be arranged. *Contribution:* \$150.

A satellite cell is a precursor for muscle regeneration. In this project, regulation of satellite cell proliferation and differentiation will be explored in cell/tissue culture. Particular attention will be paid to the influences of wound fluids and interactions with fibroblasts and macrophages. The results of these studies will provide insight into how initial conditions following injury might predispose repair events to regeneration (with functional restoration) rather than scarring. The REX volunteer would participate in preparative activities (e.g., reagent preparation), assist in performing experiments and data collection, participate in data analysis, and attend lab meetings (at which ongoing research activities are discussed). Required participant qualifications: knowledge of basic aseptic (sterile) techniques, practical experience in preparing basic reagents (e.g., buffers), and familiarity with use of the compound microscope. Project leader is Raymond E. Sicard, assistant professor, Department of Surgery. Location: Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0308 EXPLORATION OF MECHANISMS OF ANALGESIA. *Dates:* to be arranged. *Contribution:* \$150.

When skin is inflamed, non-painful stimuli are perceived as painful. It has been determined that a receptor for a neurotransmitter released from sensory neurons is increased in the spinal cord of rats that have an inflamed paw. The proposed project will determine whether drugs that block the receptor for this transmitter will block the rat's increased sensitivity to stimuli. The REX volunteer will conduct behavioral assays to study the analgesic effect of these drugs in

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laboratory rats; some training will be provided. Limited to one volunteer. Required participant qualifications: good observer, ability to keep detailed records, willingness to handle laboratory rats; must have achieved at least junior standing and completed introductory biology and chemistry courses. Project leader is Dr. Virginia Seybold, professor, Department of Cell Biology and Neuroanatomy. Location: Minneapolis campus. *Call 624-5092 for registration information and an application form.*

REX 0309 IDENTIFYING ACTIVE COMPONENTS IN NATIVE AMERICAN MEDICINES.

Dates: to be arranged. *Contribution:* \$150.

The goal of this research project is to gather Native American medicines (herbs, berries, flowers, etc.) and to use "routine" chemical techniques to extract and identify active ingredients, if any. For example, to show that the "chewing on birch tree bark"—the old Indian remedy for curing headaches—is in fact a source of acetyl-salicylic acid (aspirin). REX volunteers will extract, purify, and identify active ingredients in some natural products, for example, the oil of wintergreen from wintergreen oils. Required participant qualifications: an interest and desire to learn and then to pass on to young minds what they have learned. Project leader is Ron Caple, professor, Department of Chemistry, University of Minnesota, Duluth. Location: UMD. *Call 624-5092 for registration information and an application form.*

REX 0310 CARDIOVASCULAR DISEASE IN DIABETES. *Dates:* to be arranged. *Contribution:* \$150.

Insulin dependent diabetic patients have high mortality from coronary artery disease. The risk of premature cardiac death is concentrated in patients with kidney failure. This project involves following 242 patients evaluated at the University of Minnesota for possible kidney transplantation to see their long-term outcome with respect to heart disease. We are trying to determine why some patients live longer than others. The REX volunteer will interview patients, call patients and doctors for information, enter data into a computer, and help perform statistical analyses. Telephone skills and empathy for chronically ill adults are required. Project leader is Connie Manske, associate professor, Department of Medicine, Renal Division. Location: Minneapolis campus. *Call 624-5092 for registration information and an application form.*

REX 0311 HORMONE-INDUCED DEVELOPMENTAL ABNORMALITIES. *Dates:* to be arranged. *Contribution:* \$150.

The purpose of the project is to evaluate the current status of research related to a hypothesis that developmental abnormalities induced by unusual

estrogen/androgen levels in utero are a central factor in the etiology of homosexuality, and the feasibility of evaluating this hypothesis by measuring estrogen/androgen in stored amniocentesis samples. REX volunteers will conduct an exhaustive library evaluation and write the first draft of a review manuscript describing the results. Good writing skills are required. Project leader is W. Thomas Shier, professor, Department of Medicinal Chemistry. Location: Bio-Medical Library and other University libraries. *Call 624-5092 for registration information and an application form.*

REX 0312 PHASE PROPERTIES OF SKIN LIPIDS. *Dates:* to be arranged. *Contribution:* \$150.

The goal of this project is to characterize the phase properties of model lipids of the skin in order to understand cohesion and permeability. Activities would include isolation/synthesis of lipids and/or measurement and identification of the phases by optical and thermal analysis. Work of REX volunteers may involve biochemical isolations, chemical syntheses, or physical chemical measurements, depending on the interest of the volunteer. No specific skills required, but some chemistry background or familiarity with the laboratory would be helpful. Project leader is Timothy Wiedmann, assistant professor, Department of Pharmaceutics. Location: Minneapolis campus. *Call 624-5092 for registration information and an application form.*

REX 0315 DIET AND CANCER: HORMONAL AND DIETARY REGULATION OF METABOLISM IN HEALTH AND DISEASE. *Dates:* flexible schedule arranged. *Contribution:* \$150.

This project focuses on the effects of diet on normal cell growth and differentiation. The effects of diet components in changing normal cells to cancer cells is a central question in this research. Responding to this question requires work in more than one area. Investigators are involved in food science, microbiology, nutrition, molecular biology, and cell biology. REX volunteers can participate in a variety of activities, depending on skills and interest. These activities include cell culture maintenance, experiments to determine effects of fats and drugs on cells, and growing bacterial cultures. Required participant qualifications: high level of motivation; basic biology and chemistry. Project leader is Linda Brady, associate professor, Department of Food Science and Nutrition. Location: Andrew Boss Labs, St. Paul campus. *Call 624-5092 for registration information and an application form.*

REX 0323 PREDICTING DIABETES. *Dates:* to be arranged. *Contribution:* \$150.

Juvenile, or Type I, diabetes is a disease affecting

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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. Limited to one volunteer. Project leader is Dr. Jose Barbosa, professor, Department of Internal Medicine. Location: Phillips-Wangensteen Building 6-150, Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0324 ALCOHOL AND DEGENERATIVE DISEASES. *Dates:* 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. Limited to one volunteer. Project leader is Dr. Myron Gross, research associate, Division of Epidemiology. Location: Health Sciences Unit A, room 1-144, Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0333 QUALITY OF LIFE AFTER HEART SURGERY. *Dates:* to be arranged. *Contribution:* \$150.

This large five-site National Institutes of Health-funded study evaluates factors contributing to recovery and quality of life after heart surgery. Patients are interviewed before and after surgery, first at six weeks, then six months, and annually for five years. From this study, knowledge and understanding of the process of recovery from heart surgery will increase so that the care and quality of life of future patients may be improved. REX volunteers will do such things as conduct telephone interviews and record medical events and edit returned questionnaires. In-person subject contact is optional. Required participant qualification: good communication skills. Project leader is Ruth Lindquist, associate professor, School of Nursing. Location: Minneapolis campus and the Minneapolis Heart Institute. Call 624-5092 for registration information and an application form.

REX 0334 THE INFLUENCE OF ALUMINUM UPON EMBRYONIC BONE DEVELOPMENT.

Dates: to be arranged. *Contribution:* \$150.

Elevated levels of aluminum have been associated with a serious bone disorder, osteomalacia. The mode of action of aluminum toxicity in the expression of osteomalacia is not well understood. This project will examine the influence of aluminum slats upon local versus systemic factors which are known to be important in embryonic bone development, using the chick embryo as the experimental model. REX volunteers will do animal culture and dissection, solution preparation, histochemical preparation of skeletal tissue for microscopic study, light photomicroscopy, basic statistical analysis of data, and possibly simple biochemical determinations. Completion of basic course work in inorganic and organic chemistry along with one to two years of course work in the biological sciences are required. Project leader is Conrad E. Firling, professor, Department of Biology, University of Minnesota, Duluth. Location: UMD. Call 624-5092 for registration information and an application form.

REX 0335 QUALITY ASSURANCE/PATIENT SAFETY MONITORING. *Dates:* to be arranged. *Contribution:* \$150.

This study seeks to assess and follow-up on a variety of surgical patient parameters (e.g., pulse oximetry, vitals, complications intra- and post-operatively) in order to improve quality of care and patient safety. Because REX volunteers will collect data and perform statistical analysis of quality assurance parameters, experience using statistics is required. Project leader is Shep Cohen, assistant professor, Department of Anesthesiology. Location: Minneapolis V.A. Medical Center. Call 624-5092 for registration information and an application form.

REX 0337 DETERMINATION OF INCOMPETENCY. *Dates:* to be arranged; sixmonth commitment preferred. *Contribution:* \$150.

This project seeks to determine the criteria and events surrounding decision making when an elderly person can no longer care for his or her person and possessions. Depending on the phase of the study and the skills of the volunteers, REX participants may extract data from court records, telephone guardians to explain the study, recruit volunteers from caregiver groups, enter data, write reports, or perform statistical analysis. Project leader is Mary Weinensee, assistant professor, School of Nursing. Location: Health Sciences Unit F, room 6-101, Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0342 IMPROVING PHYSICAL PERFORMANCE OF THE ELDERLY. *Dates:* minimum of

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four weeks, four to eight hours a day, three to five days a week; to be arranged. *Contribution:* \$150.

Promote the reality that one can live in control of one's life and daily activities as one advances in age. This University project assesses balance, physical performance, and cardiovascular stability of persons over age 65. REX volunteers will telephone contacts, conduct interviews, and assist with subject recruitment, maintenance, and laboratory assessment. Good communication skills are required; some background in physiology or physics would be helpful. Project leader is Ruth Lindquist, associate professor, School of Nursing. Location: Minneapolis campus. *Call 624-5092 for registration information and an application form.*

REX 0343 ISOLATION AND CHARACTERIZATION OF PANCREAS ENZYME. *Dates:* to be arranged. *Contribution:* \$150.

Both kidney and pancreas transaminase activities are controlled by creatine in the diet and by growth hormone. The kidney enzyme, but not the pancreas enzyme, has been purified and characterized. Both purified enzymes are needed for investigations on the nature of the regulation of their activities by creatine and growth hormone. REX volunteers will help improve a procedure already developed by the researchers to isolate and characterize the pancreas enzyme. Some previous lab experience helpful but not necessary, as project leader will teach all necessary skills. Project leader is John F. Van Pilsom, professor emeritus, Department of Biochemistry. Location: Minneapolis campus. *Call 624-5092 for registration information and an application form.*

REX 0344 BIOMEDICAL RESEARCH ON DISEASES OF MUSCLE. *Dates:* minimum of five weeks, three to four hours a day, one to five days a week; to be arranged. *Contribution:* \$150.

Working closely with the project leader and research staff, join this research related to muscle diseases (myotonia and malignant hyperthermia) and muscle physiology. Participate in laboratory work, including preparation of solutions and electrodes, dissection of biopsy specimens (human and pig skeletal muscle), and data collection and analysis. REX volunteers must have patience, an open-minded attitude toward animal utilization for research, and an interest in science. Project leader is Paul Iaizzo, assistant professor, Department of Anesthesiology. Location: Minneapolis campus. *Call 624-5092 for registration information and an application form.*

REX 0346 RAPID DETECTION OF TUMOR CELLS IN MICROGRAPHIC SURGERY. *Dates:* to be arranged. *Contribution:* \$150.

Mohs micrographic surgery, a procedure used to

remove skin cancer, relies on the examination of rapidly stained tissue sections for tumor-free margins. Squamous cell carcinoma often eludes conventional detection methods. REX volunteers will help devise a rapid antibody-based assay for the reliable detection of residual tumor. Actual work includes: cryostat sectioning of skin specimens, composing buffers, diluting antibodies, immunostaining tissue sections, and photomicrography. Required participant qualifications include basic college-level knowledge of chemistry and elementary biology as well as two quarters of lab or equivalent employment experience. Project leader is Christopher B. Zachary, assistant professor, Department of Dermatology. Location: Phillips-Wangenstein Building, Minneapolis campus. *Call 624-5092 for registration information and an application form.*

REX 0347 MEASUREMENT OF O₂ AND pH IN MUSCLE. *Dates:* to be arranged. *Contribution:* \$150.

Seeking to ultimately measure O₂ and pH in the muscle of humans suffering from chronic pain of muscular origin, researchers are first measuring these parameters in the muscles of rats with the use of microelectrodes. Initial experiments are designed to determine the reproducibility of these measurements. In addition, researchers want to know what interventions will alter O₂ and pH. Using microelectrodes, volunteers will measure levels of O₂ and pH in the muscles of anesthetized rats and work to develop innovative approaches to making these measurements. Participants are required to have a basic background in college biology and chemistry. Project leader is Keith C. Kajander, assistant professor, Department of Oral Sciences. Location: Moos Tower, Minneapolis campus. *Call 624-5092 for registration information and an application form.*

REX 0348 INFECTION AND IMMUNITY. *Dates:* to be arranged. *Contribution:* \$150.

This on-going research focuses on host defense against bacterial and viral infections. The overall goal of these projects is to understand on a molecular level those aspects of immunity that are important for recovery from specific infections. Also of interest is how alcohol, drugs of abuse, and stress suppress host defense mechanisms and increase susceptibility to infections. The REX volunteer will have a specific project in the area of host defense and infections determined by current studies in the laboratory and the volunteer's interests and goals. The project will be a manageable and important aspect of the studies described above. The work will include laboratory experiments with the project leaders and their graduate students, as well as analysis of results and current literature. Basic knowledge of biological sciences is needed. The volunteer should be a critical thinker and

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self-motivated. The specific project will be determined by the volunteer's background and skills. Project leaders are Martha A. Mellencamp and Thomas W. Molitor, associate professors, Department of Clinical and Population Sciences. Location: St. Paul campus. Call 624-5092 for registration information and an application form.

REX 0360 REGIONAL RURAL INJURY STUDY.

Dates: minimum commitment of four weeks; to be arranged. *Contribution:* \$150.

Funded by the Centers for Disease Control, the primary purpose of this project is to identify the magnitude and potential risk factors of the injury problem in rural populations in a five-state region representative of the major types of agricultural production in the United States. The ultimate goal is to use the results to develop agricultural and other injury prevention and control programs in rural areas. REX volunteers will assist with the development of papers, including literature searches; work with co-investigators as they finalize analysis and do interpretation; assist in writing drafts; and become involved in a major regional workshop to disseminate information. Excellent organizational and writing skills and basic math skills are required. Project leader is Susan Gerberich, associate professor, Division of Environmental and Occupational Health. Location: Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0370 ATTENTION DEFICIT DISORDER: DISCOVERING NORMS FOR TESTING.

Dates: to be arranged; minimum commitment of three months preferred. *Contribution:* \$150.

The T.O.V.A.TM is a 22-minute computer "game" that measures speed and accuracy of visual information processing. It has been shown to be valuable in assessing attention deficit disorders in children and adults. However, more extensive norms are needed. Using portable laptop computers provided by the research project, two REX volunteers can help move this project forward as they test children, teenagers, and/or adults. Volunteers must provide their own transportation and possess good interpersonal skills, but knowledge of computers is not necessary. Project leader is Lawrence M. Greenberg, professor, Department of Psychiatry. Location: subjects' homes or community organizations where they gather. Call 624-5092 for registration information and an application form.

REX 0407 HISTORICAL ATLAS OF THE ST. PAUL CENTRAL BUSINESS DISTRICT.

Dates: to be arranged. *Contribution:* \$150.

Using Geographic Information System (GIS) technology, a series of maps showing the development

of the central business district of St. Paul is being created. After learning basic GIS techniques, REX volunteers will acquire information from a variety of sources (e.g., Minnesota Historical Society, St. Paul Public Works Department) and, using one of the most advanced GIS packages available, add information to a computerized digital base map being developed for 1884. This map can then be manipulated to highlight different aspects of land use, infrastructure, and socioeconomic development. Participants must be able to work with systematic records; computer knowledge helpful but not required. Project leader is Roger Miller, associate professor, Department of Geography. Location: Minneapolis campus and city and state offices. Call 624-5092 for registration information and an application form.

REX 0433 1, 3-DIMETHYL-2-PHENYL-BENZIMIDAZOLINE; ANNADH ANALOGUE?

Dates: to be arranged. *Contribution:* \$150.

The title compound will be prepared by known methods and tested as a reducing agent for a range of oxidizing agents (NAD⁺ analogues). When a suitable oxidizing agent is found, the rate and equilibrium constants will be measured for the hydride transfer. REX participants will do synthesis and characterization of the title compound and precursors, and, if time permits, oxidation reactions. Required participant qualification: freshman chemistry, including some very elementary organic chemistry. Project leader is Maurice M. Kreevoy, professor, Department of Chemistry. Location: Kohltoff Hall, Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0434 MECHANISTIC ORGANIC CHEMISTRY.

Dates: to be arranged. *Contribution:* \$150. Fundamental reactivity of charged species and learning about the relationship between their structure and reactivity is the focus of this project. This is reflected in mechanistic studies and the investigation of theoretically interesting compounds (e.g., antiaromatic ions). REX volunteers will make organic compounds and characterize them using modern spectroscopic tools. Required participant qualification: at least one year of college organic chemistry. Project leader is Steven Kass, associate professor, Department of Chemistry. Location: Kolthoff Hall, Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0436 STARCH-BASED PLASTICS.

Dates: to be arranged. *Contribution:* \$150. This project involves making useful plastics from agricultural sources such as starch or protein. The objectives are to process these materials and test for their properties. Activities for the REX volunteers

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will include operating such equipment as extruders or blenders and testing materials for their chemical and physical properties. Some understanding of chemistry is required. Project leader is Mrinal Bhattacharya, assistant professor, Department of Agricultural Engineering. Location: St. Paul campus. Call 624-5092 for registration information and an application form.

REX 0437 TEMPERATURE EFFECTS ON DIFFUSION AND REACTION IN GLASSY-RUBBERY MATERIALS LIKE POTATO CHIPS.

Dates: to be arranged. *Contribution:* \$150.

This research investigates the critical moisture/temperature parameters that are the borderline of the crisp-to-flaccid transition in dry cereal foods. These results would be used for the formulation of more stable crispy snacks and cereals (e.g., bowl life in milk). The REX volunteer would conduct DSCs, moisture sorption isotherms, measurements of instron texture, and moisture uptake on Bauman. An interest in science and good documentation skills are required; some computer experience is preferred. Project leader is Dr. Ted Labuza, professor, Department of Food Science and Nutrition. Location: St. Paul campus. Call 624-5092 for registration information and an application form.

REX 0438 STRUCTURE AND PROTEIN ENGINEERING.

Dates: to be arranged. *Contribution:* \$150.

The Ohlendorf lab studies the structure of large molecules like DNA and proteins. The knowledge of these structures is used to design better proteins and drugs. Current research is on toxic shock protein, dioxigenases, DNA binding proteins, and other proteins imported in cystic fibrosis. There are projects involving biochemistry, molecular biology, and computers. The type of work assigned to REX volunteers will depend on the area selected by each volunteer. Work includes solving macromolecular structures, making nutrients, and designing proteins and drugs. Volunteers should have a basic understanding of chemistry and biology. Project leader is Douglas Ohlendorf, associate professor, Department of Biochemistry. Location: Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0440 BEHAVIOR OF HIGH-STRENGTH CONCRETE: MATERIALS RESEARCH.

Dates: to be arranged. *Contribution:* \$150.

The goals of this research are to understand material behavior and take advantage of highest attainable strengths in structural systems, and to better detail structures for earthquake resistance. Experimental research will be conducted in the lab to investigate

these issues. REX volunteers will assist in the laboratory with tests. No specific background required, just an interest in the program. Project leader is Cathy French, associate professor, Department of Civil and Mineral Engineering. Location: Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0441 CAVITATION OR "BUBBLE, BUBBLE, TOIL AND TROUBLE."

Dates: to be arranged. *Contribution:* \$150.

This is a research project on cavitation in tip vortex flow. The goal is to understand the mechanism of cavitation in a complex flow. Special instrumentation such as LDA and high speed photography are used relate the bubble dynamics to the structure of a tip vortex. The REX volunteer would assist in high speed photography, measuring the tensile strength of water (yes, tensile strength), LDA measurements, and data reduction. A strong background in physics and/or engineering is required; some knowledge of optics would be helpful. Project leader is Roger E. A. Arndt, professor, Department of Civil and Mineral Engineering. Location: St. Anthony Falls Hydraulic Lab, Minneapolis. Call 624-5092 for registration information and an application form.

REX 0442 THE IMPACT OF ROAD INFORMATION/INCIDENT ADVISORIES ON DRIVERS' ROUTE CHOICES.

Dates: to be determined. *Contribution:* \$150.

Information on road delays and incidents/accidents affects drivers' route to work choices. This project seeks to quantify these effects so that we can find better ways to design traveler advisory messages on radio and television. REX volunteers will personally interview commuters at their place of work (e.g., the University), tabulate responses in computer files, and possibly analyze responses. Interviewing skills with an emphasis on personal interviews are required. Project leader is Yorgos Stephanedes, professor, Department of Civil and Mineral Engineering. Location: major work locations including the University of Minnesota. Call 624-5092 for registration information and an application form.

REX 0443 BEHAVIOR OF HIGH-STRENGTH PRESTRESSED BRIDGE GIRDERS.

Dates: to be arranged. *Contribution:* \$150.

The goal of this research is to investigate the application of high-strength concrete to prestressed bridge girders. Two prestressed bridge girders are to be fabricated with high-strength concrete, which enables up to 30-percent increases in span lengths compared with conventionally fabricated girders. The girders will be instrumented to determine long-term prestress losses, deflections, fatigue behavior, and

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flexural and shear strengths. REX volunteers will assist with the tests and data reduction. The only required participant qualification is an interest in the program. Project leader is Cathy French, associate professor, Department of Civil and Mineral Engineering. Location: The tests will be conducted in a laboratory approximately five miles from the University of Minnesota Twin Cities campus. Call 624-5092 for registration information and an application form.

REX 0444 PRECAST CONCRETE MEMBERS SUBJECTED TO EARTHQUAKE LOADING. *Dates:* to be arranged. *Contribution:* \$150.

Precast structures are constructed using individual beam and column elements that have been prefabricated in a plant. This construction method offers superior quality control over cast-in-place concrete. In addition, it is possible to reduce the structural erection time. In seismic regions, structures are subjected to large lateral loads. Consequently, the design and detailing of connections which tie the individual beam and column elements together become critical. A research program is currently underway to investigate the behavior of several types of connections between precast elements subjected to simulated earthquake loading. The experimental research will be conducted in the Civil and Mineral Engineering Structural Lab. REX volunteers will assist in the laboratory with tests. The only required participant qualification is an interest in the program. Project leader is Cathy French, associate professor, Department of Civil and Mineral Engineering. Location: Minneapolis campus, University of Minnesota. Call 624-5092 for registration information and an application form.

REX 0451 COMPUTER SIMULATIONS OF SOLIDS AND LIQUIDS. *Dates:* to be arranged. *Contribution:* \$150.

Computers are used to describe solids and liquids at the atomic level. Vivid images of the motion of atoms can be obtained. Results provide new research insights into properties of solids and liquids and are also good teaching tools. Programs are adaptable to microcomputers. REX volunteers will run developed codes on supercomputers and develop new codes as abilities and time allow. They will gain knowledge about solid and fluid state physics and the use of supercomputers. Required participant qualifications: first-year college calculus-based physics; some knowledge of FORTRAN computer language. Project leader is J. W. Halley, professor, Department of Physics. Location: Physics Building, Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0470 PHOTOREFLECTANCE STUDIES OF COPLANAR STRUCTURES ON SEMICONDUCTOR SUBSTRATES. *Dates:* to be arranged. *Contribution:* \$150.

Photoreflectance (PR) is widely used as a tool to probe the electric fields at the surfaces and interfaces of semiconductors. The advantages of using PR is that it is contactless and can be done at room temperature. In PR the reflectance of a sample (in this case a semiconductor material, gallium arsenide) is modulated by a laser beam; the change in the reflectance of the sample is then detected by a photodetector when it is probed by another beam of variable wavelength at a weaker intensity. By analyzing the change in the reflectance from the sample, information about the strength of the electric field can be determined. This project is to develop PR as a tool to measure the electric field profile of the semiconductor substrates such as GaAs. The field profile is important for the following reasons: it affects the performance and speed of the device fabricated from the material, and it determines the speed of propagation of signals travelling on transmission lines (such as microstrip lines or coplanar waveguides) fabricated on these substrates. The REX volunteer will be involved in running the experiments or setting up the experiments for measurement. The volunteer can also improve the instrumentation. Required participant qualifications: a willingness to learn, some experience with computers, and an interest in physics or physical chemistry. Project leader is Philip Cheung, assistant professor, Department of Computer Engineering, University of Minnesota, Duluth. Location: UMD. Call 624-5092 for registration information and an application form.

REX 0603 EDUCATORS WHO HAVE DISABILITIES. *Dates:* to be arranged. *Contribution:* \$150.

The purpose of this project is to examine the lives of persons with disabilities who are, or are training to become, educators. 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 educators. Volunteers will also prepare interview transcripts and analyze interview data. Volunteers need strong interpersonal skills and adequate typing skills. Experience with persons with disabilities and familiarity with Macintosh computers helpful but not necessary. Project leaders are Clayton Keller and Joan Karp, assistant professors, Department of Child and Family Development, University of Minnesota, Duluth. Location: Montague Hall 120, UMD. Arrangements to conduct this research outside of the Duluth area can be made. Call 624-5092 for registration information and an application form.

★ Indicates limited-enrollment section. See abbreviations and symbols, page 34.

* Tuition definitions of Resident and Non-resident explained on page 9.

Noncredit Courses

REX 0607 WOMEN IN SCIENCE, ENGINEERING, AND MATHEMATICS MAJORS. *Dates:* flexible schedule to be arranged. *Contribution:* \$150. After examining the retention rates of both male and female students majoring in science, engineering, and mathematics at the University of Minnesota, Duluth, the goal of this project is to determine whether these rates are different for men and women and whether a recently established mentoring program for women has any impact on the rates. A REX volunteer will establish hypotheses to be tested, design experiments to test the hypotheses, gather and analyze data, and draw conclusions. A solid background in statistics or mathematics is required. Project leader is Linda Deneen, associate professor, Department of Computer Science, University of Minnesota, Duluth. Location: UMD. Call 624-5092 for registration information and an application form.

REX 0608 ADVENTURES IN VOICE EDUCATION. *Dates:* minimum fourweek commitment; schedule to be arranged between Aug. 1993 and Aug. 1994. *Contribution:* \$150.

Are you interested in the voice and how it functions? Learn more about this topic as you assist the project leader in researching, collecting data, compiling materials, and processing information about singing and teaching voice. The ultimate goal is production of a college text and video about singing and voice education. Required participant qualifications: library research skills and ability to use Macintosh SE30. Project leader is Clifton Ware, associate professor, School of Music. Location: Music Library and Ferguson Hall, Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0609 DECISION CASE FOR ENVIRONMENTAL EDUCATION. *Dates:* to be arranged. *Contribution:* \$150.

Volunteers will collaborate with the program for decision cases within the College of Agriculture to develop an original decision case study for use in a secondary education curriculum context. The specific case topic is to be selected by the participant with concurrence of faculty supervisor. REX volunteers will outline, research, and prepare one decision case and interpretive note for use in secondary education. Required participant qualifications: secondary teaching experience, the capacity to work independently, an interest in environmental issues involving agriculture, and an ability to translate ideas into writing. Project leader is Steve Simmons, professor, Department of Agronomy and Plant Genetics. Location: St. Paul campus and various case sites. Call 624-5092 for registration information and an application form.

REX 0610 NUTRITION EDUCATION DECISION CASES FOR 4-H; EFFECTIVENESS OF CASE METHODS. *Dates:* to be arranged. *Contribution:* \$150.

The purpose of this project is to develop and evaluate nutrition education decision cases for use in elementary and secondary schools or 4-H. Decision cases for youth will involve nutrition, food science, and food safety topics. REX volunteers will research and write cases, pilot test in 4-H clubs, and evaluate effectiveness compared to other nutrition education delivery methods. Required participant qualifications: secondary teaching experience and good research, library, and writing skills. Project leader is Marla Reicks, assistant professor, Department of Food Science and Nutrition. Location: St. Paul campus. Call 624-5092 for registration information and an application form.

REX 0611 FOOD ISSUE DECISION CASES. *Dates:* to be arranged. *Contribution:* \$150.

The decision case is a teaching method that promotes critical thinking skills in students. The goal of the project is to develop decision cases usable in secondary education. REX volunteers will research an actual food-related decision case, help develop decision cases, and test the cases during the following academic year. Secondary teaching experience, inquisitiveness, good communication skills (especially writing), and a desire to improve one's own teaching skills are required. Project leader is Craig Hassel, assistant professor, Department of Food Science and Nutrition. Location: St. Paul campus and various other locations. Call 624-5092 for registration information and an application form.

REX 0612 ALZHEIMER'S DISEASE CARE GIVER TRAINING PROGRAM. *Dates:* to be arranged. *Contribution:* \$150.

The aim of this project is development of an educational program with formal classes and structured practicum for spouses of individuals with early or moderate Alzheimer's Disease. Participants will learn how to use the cuing and assistive techniques of the Adapted Work Program with home activities. Changes in both patient and spouse will be measured. The REX volunteer will develop educational materials—curricula, learning modules, and tools for measuring pre- and post-interventions. Skills in developing learning materials, especially approaches for adult learners, are required. Project leader is Melitta Maddox, adjunct instructor, School of Nursing. Location: VA Medical Center, Minneapolis. Call 624-5092 for registration information and an application form.

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* Tuition definitions of Resident and Non-resident explained on page 9.

REX 0613 INCLUSIVE SCHOOL COMMUNITIES. *Dates:* to be arranged. *Contribution:* \$150.

The purpose of this project is to determine critical values and competencies for administrators and teachers in inclusive school communities. Activities include dialogue (focus groups and structured interviews) with "experienced" educators. REX volunteers will develop instruments, conduct groups, analyze data, and synthesize literature while working closely with the support of the research team. Volunteers should be organized, able to outline thoughts, and have good interpersonal skills. Project leader is Jennifer York, assistant professor, Department of Educational Psychology. Location: Minneapolis campus. *Call 624-5092 for registration information and an application form.*

REX 0614 CITIZENSHIP IN THE CLASSROOM. *Dates:* to be arranged. *Contribution:* \$150.

This project will assess how students and teachers view and understand important concepts in citizenship such as tolerance and patriotism. It will also focus on how teachers of social studies perceive their roles as teacher and as citizen. The results will be used to write curriculum materials for use in secondary education and to conduct research on the curriculum's effectiveness. Q-sorts, interviews, and surveys will be used to evaluate these role orientations. The REX volunteers will aid in survey and Q-sort construction, help mail research materials to social studies teachers, arrange and conduct in-person interviews with local social studies teachers, and assist in data analysis. Good language, writing, and interpersonal skills are required. Project leaders are John Sullivan, professor, Department of Political Science; and Patricia Avery, associate professor, Department of Curriculum and Instruction. Location: Minneapolis campus. *Call 624-5092 for registration information and an application form.*

REX 0802 ARTISTIC DISCOVERY ABOUT 17TH-CENTURY NAPLES. *Dates:* schedule to be arranged. *Contribution:* \$150.

Although Caravaggio, an Italian Baroque painter, has become familiar to many today, Caracciolo, another artist greatly influenced by Caravaggio, 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. Limited to one volunteer. Project leader is Michael Stoughton, professor, Department of Art History. Location: Jones Hall 107, Minneapolis campus. *Call 624-5092 for registration information and an application form.*

REX 0803 CITYSONGS: A TWIN CITIES DEMONSTRATION PROJECT IN MUSIC. *Dates:* to be arranged. *Contribution:* \$150.

CitySongs seeks to promote healthy psychosocial development among diverse youth via popular music participation. At the pilot site, a popular music choir for 8 to 12 year olds is sponsored, as well as one for 13 to 18 year olds. Through regular, stable, and meaningful activity led by an admired role model, young people are taught the capacities for discipline, effort, and satisfaction at well-earned success. The REX volunteers will attend rehearsals for one choir and assist with attendance taking, provide additional adult support, observe participants, take daily field notes, and assist with the year-end evaluation. Required participant qualifications: ability to type field notes, ability to work with culturally diverse young people, and ability to work with adults of varying ages and racial, ethnic, and socioeconomic groups. Project leader is Helen Q. Kivnick, associate professor, School of Social Work. Location: Hallie Q. Brown-Martin Luther King Center, St. Paul. *Call 624-5092 for registration information and an application form.*

REX 0804 2D ON 3D. *Dates:* to be arranged. *Contribution:* \$150.

This project deals with flat or 2-dimensional images on 3-dimensional form. The images change proportion as the viewers change positions. Goals include the following: 1) the camouflaging of 3-dimensional form, 2) the enhancing of 3-dimensional form, 3) the counterpoint of 2-D rhythm with 3-D rhythm, and 4) using the former concepts to create significant form and expressive content. REX volunteers will help build, paint, and discuss strategy as well as analyze and develop criticism. Required participant qualifications: the skills that any elementary or secondary art teacher would have (i.e., simple flat painting experience). Project leader is David Feinberg, associate professor, Department of Studio Arts. Location: Minneapolis campus. *Call 624-5092 for registration information and an application form.*

REX 0902 THE ORIGIN OF ENGLISH WORDS. *Dates:* starting and ending dates arranged; flexible schedule. *Contribution:* \$150.

The history of words is as hard to trace and as interesting to study as the rise and fall of old kingdoms or the origins of planets. Some words have existed in English for more than 1,000 years and still no one knows from where they came. Even when the origins of words are known, vigorous debate about the details often continues. This project is part of a University of Minnesota effort to compile a new etymological dictionary of English. Volunteers will study bibliographies and journals and contribute to the files of the dictionary. Their contribution will be mentioned

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Noncredit Courses

in the final product; individual scholarly projects (with or without academic credit) are possible. Project leader is Anatoly Liberman, professor, Department of German. Location: Wilson and Walter Libraries, Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0903 THE PRAGMATICS OF WORD ORDER IN SPOKEN SPANISH. *Dates:* to be arranged. *Contribution:* \$150.

Study the motivation of word order variation in three-constituent constructions. After training, REX volunteers will search transcriptions of recorded conversations in order to identify these constructions and classify them. Project leader is Francisco Ocampo, assistant professor, Department of Spanish and Portuguese. Location: Folwell Hall, Minneapolis campus. Call 624-5092 for registration information and an application form.

REX 0904 THE GERMAN LANGUAGE IN MINNESOTA. *Dates:* flexible schedule to be arranged. *Contribution:* \$150.

In an ongoing study, the project leader is recording the speech of Minnesota natives who speak German for a cultural and linguistic analysis of the changes that have taken place in the language and culture since it was imported into Minnesota. REX volunteers will conduct interviews of Minnesota-born German speakers from regions around the state where such speakers are still found. Knowledge of German is required. Project leader is Evelyn S. Firchow, professor, Department of German. Location: various counties in Minnesota. Call 624-5092 for registration information and an application form.

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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 16th year in Minnesota, Elderhostel is part of a national network that began 19 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 \$305-320 for food, lodging, and class instruction.

May 23-29, Itasca State Park: **Deep in the Virgin Forest—Spring in the Mississippi Headwaters Country.**

July 18-24 and July 22-28, Minneapolis Campus: **Sommerfest '93—A Viennese Music Festival.**

Oct. 3-9, 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 and Programs

An Extension student may use the Recreational Sports facilities and programs by purchasing a Participation Permit at one of the Recreational Sports offices only: University Recreation Center (Minneapolis campus) or 104 St. Paul Gymnasium (St. Paul). Call 625-6800 or 625-8283 for the latest fee amounts. Proof of registration is necessary for purchase.

Students who cancel classes must surrender their permit, which becomes invalid

immediately upon cancellation.

Students must present the Participation Permit each time they use the facilities. The sports facilities include swimming pools, fitness centers, handball/racquetball courts, squash courts, tennis courts, gymnasiums (basketball, volleyball, badminton) sports fields, etc.

Services for Students with Disabilities

The University provides services to ensure access for students with physical, sensory, learning, and psychological disabilities. Disabilities Services (DS) provides direct assistance such as information, referral, advocacy, support, and academic accommodations (e.g., interpreters, readers, etc.), for enrolled and prospective students, as well as consultation and education with faculty and staff to promote access to programs and facilities. The DS office will also assist disabled students in obtaining services from other University and community resources. University policy calls for accommodations to be made on an individualized and flexible basis, therefore it is the responsibility of students to seek assistance and to make their needs known. For more information, contact Disabilities Services, 16 Johnston Hall, 624-4037 (voice/TDD).

Health Service

(Telephone 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 Benefits 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 Benefits Plan is: 10-week term plus 4-week interim, \$120; first 5-week term, \$40; second 5-week term plus 4-week interim, \$80; interim only, \$40. 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 21 for first summer term or July 30 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. Prescription drugs, eye glasses, and dental care are available at Boynton's normal low prices. 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 Benefits 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 Benefits Plan, call 624-1471. For insurance questions, call 624-0627.

Boynton Health Service is located on the East Bank of the Minneapolis campus 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 Benefits 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 4.7 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.

General Information

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, 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 625-6009. 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 rental each quarter. Deposit cards must be purchased 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 Skyway Service Center for West Bank, and on the St. Paul campus at 213 Agricultural Engineering and 32 McNeal Hall. For more information, call the East Bank main office at 625-5623.

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; miscellaneous entertainment coupons and tickets, and campus bus (Route 13) punch cards.

Parking Facilities

Parking is available for Extension students at various facilities on campus. Parking fees vary depending on the facility location. For more parking information, including disabled parking, call 626-PARK or 625-6566. Call 625-0357 to request parking maps.

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
- Police administration 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 year round. 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 CEE Counseling Office, telephone 625-2500, to arrange day or evening advising. For complete information, see page 683 in the 1992-93 Extension Classes Bulletin.

Degrees

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 Human Ecology
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.)
Master of Education in Leadership
Graduate Minor Program in Gerontology

Certificates

Check the list in the 1992-93 Extension Classes Bulletin, page 706.

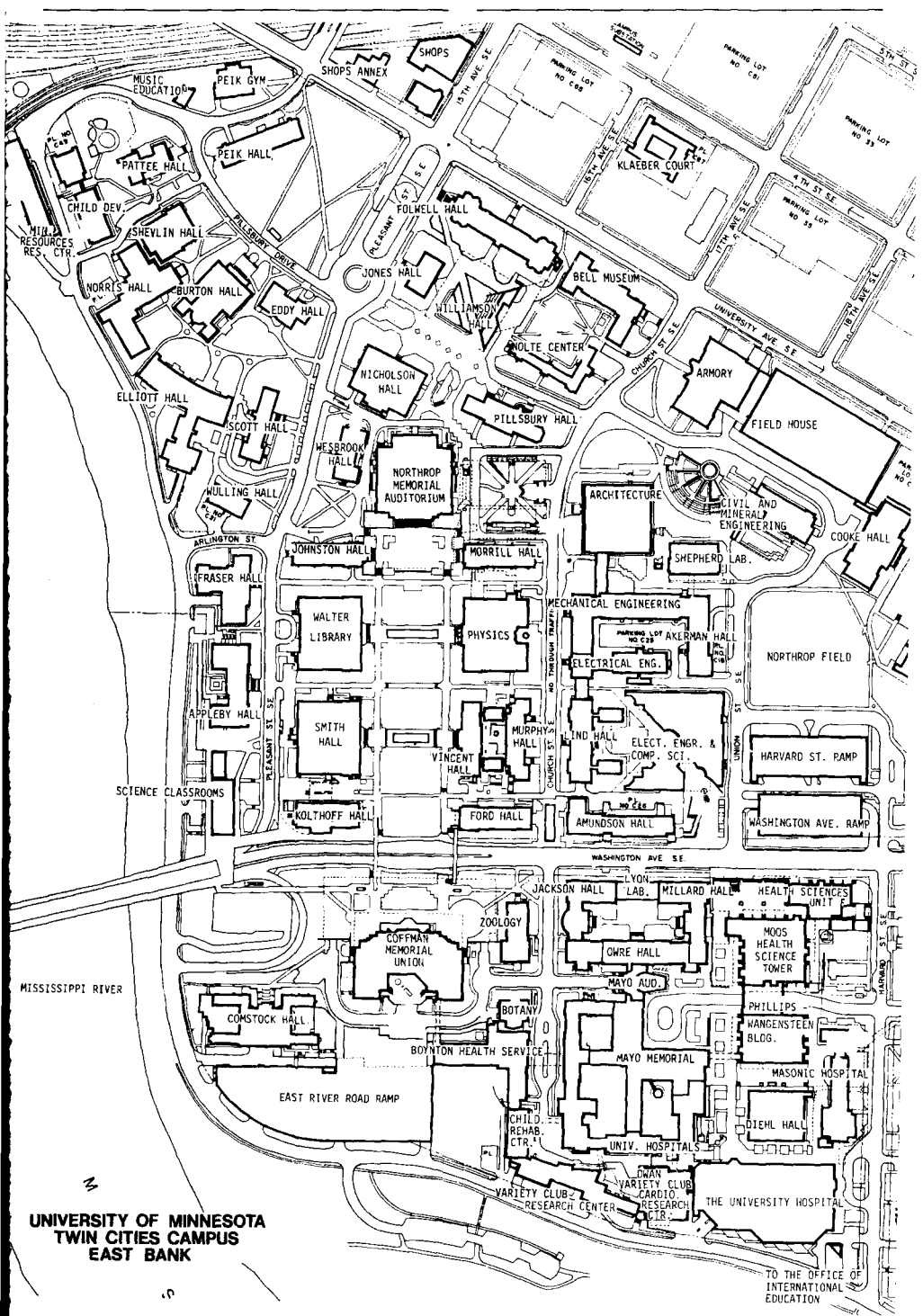
For free academic advising, telephone 625-2500

Campus Buildings

- AmundH, *Amundson Hall*
 AkerH, *Akerman Hall*
 AndH, *Anderson Hall (West Bank)*
 ApH, *Appleby Hall*
 Arch, *Architecture*
 ArtB, *Art Building (West Bank)*
 BellMus, *Bell Museum of Natural History*
 BFAB, *Bierman Field Athletic Building*
 BioSci, *Biological Sciences Center (St. Paul)*
 BlegH, *Blegen Hall (West Bank)*
 BorH, *Borlaug Hall (St. Paul)*
 BuH, *Burton Hall*
 CentLib, *Central Library (St. Paul)*
 ChDev, *Child Development*
 CrstnL, *Christensen Laboratory Building (St. Paul)*
 CivMinE, *Civil and Mineral Engineering*
 ClaOff, *Classroom Office Building (St. Paul)*
 CofH, *Coffey Hall (St. Paul)*
 CookeH, *Cooke Hall*
 EBCEC, *Earle Brown Continuing Education Center (St. Paul)*
 EE/CSci, *Electrial Engineering/Computer Science Building*
 EltH, *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.)*
 JonesH, *Jones Hall*
 KoltH, *Kolthoff Hall*
 Law, *Law Building (West Bank)*
 LindH, *Lind Hall*
 MacP, *MacPhail Center, 1128 LaSalle Avenue, downtown Minneapolis*
 Mayo, *Mayo Memorial Hospital*
 MechE, *Mechanical Engineering*
 McNH, *McNeal Hall (St. Paul)*
 MoosT, *Moos Tower*
 MurH, *Murphy Hall*
 NichH, *Nicholson Hall*
 NCCE, *Nolte Center for Continuing Education*
 NorrisH, *Norris Hall*
 NorH, *North Hall (St. Paul)*
 PtH, *Pattee Hall*
 PeikH, *Peik Hall*
 PeikG, *Peik Gymnasium*
 Phys, *Physics*
 PillsH, *Pillsbury Hall*
 RarigC, *Rarig Center (West Bank)*
 SciCB, *Science Classroom Building*
 ShevH, *Shevlin Hall*
 ScottH, *Scott Hall*
 SmithH, *Smith Hall*
 VinH, *Vincent Hall*
 VoTech, *Vocational-Technical Education (St. Paul)*
 WaLib, *Walter Library*
 WullH, *Wulling Hall*

Departments, Course Designators

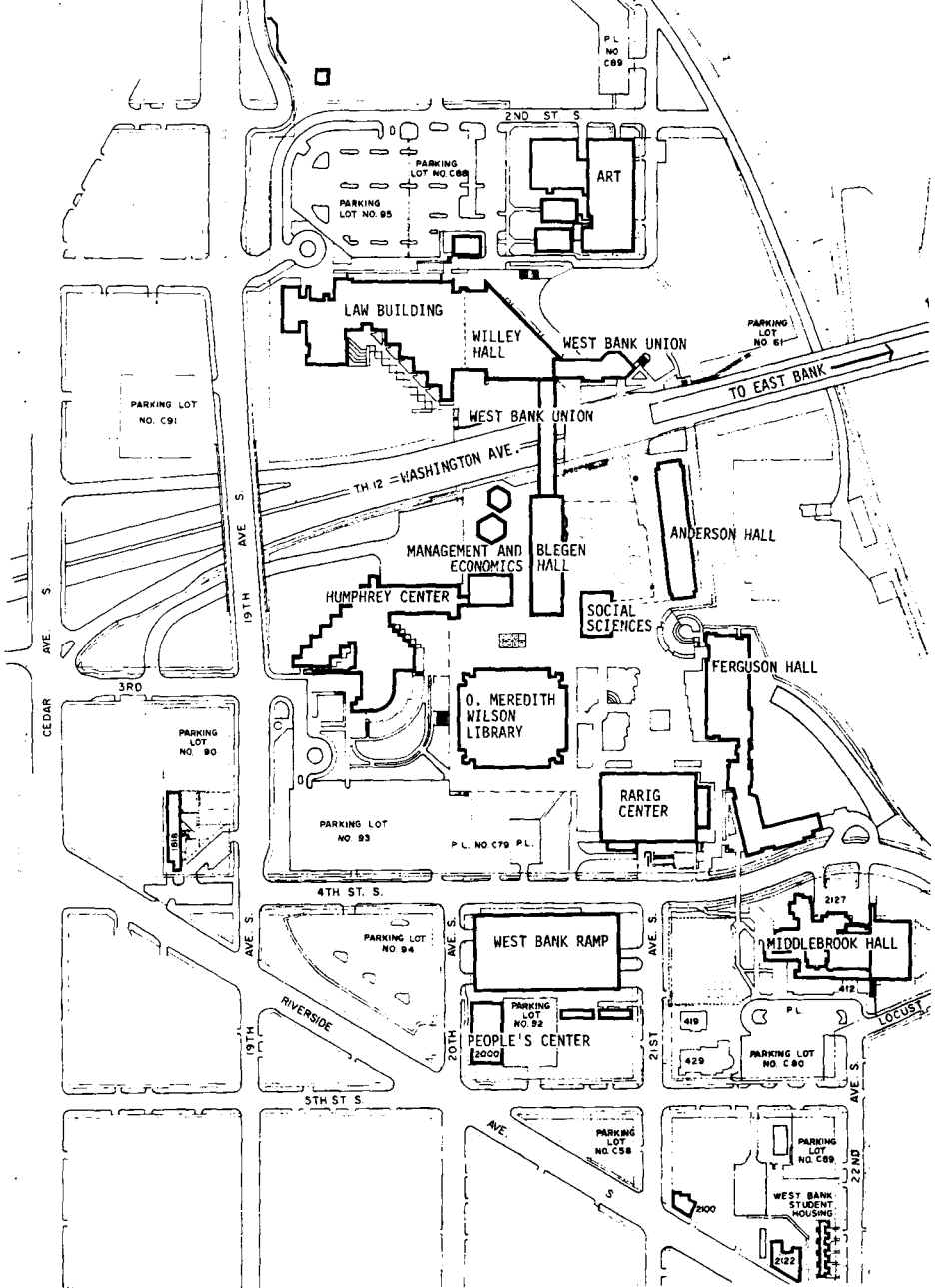
- Acct, *Accounting*
Afro, *Afro-American and African Studies*
AmIn, *American Indian Studies*
AmSt, *American Studies*
AnSt, *Ancient Studies*
Anth, *Anthropology*
Arab, *Arabic*
Arch, *Architecture*
ArEd, *Art Education*
Arth, *Art History*
ArtS, *Studio Arts*
Biol, *Biology*
BGS, *Business, Government, and Society*
BFin, *Business Finance*
BLaw, *Business Law*
Chic, *Chicano Studies*
CPsy, *Child Psychology*
Chn, *Chinese*
Clas, *Classics*
CSch, *Compleat Scholar*
Comp, *English Composition*
CDis, *Communication Disorders*
CSci, *Computer Science*
CSCL, *Cultural Studies and Comparative Literature*
Dnce, *Dance*
Dsgn, *Design*
DHA, *Design, Housing and Apparel*
EAS, *East Asian Studies*
Econ, *Economics*
EPsy, *Educational Psychology*
Elem, *Elementary Education*
Engl, *English (language and literature)*
EngW, *English (creative and professional writing)*
ESL, *English as a Second Language*
FSoS, *Family Social Science*
Fren, *French*
FrIt, *French and Italian*
GC, *General College*
Ger, *German*
Hist, *History*
Hum, *Humanities*
IEOR, *Industrial Engineering/Operations Research*
IR, *Industrial Relations*
IDSc, *Information and Decision Sciences*
Jpn, *Japanese*
JwSt, *Jewish Studies*
Jour, *Journalism and Mass Communication*
LA, *Landscape Architecture*
Lat, *Latin*
LAS, *Latin American Studies*
LASK, *Learning and Academic Skills*
Ling, *Linguistics*
Mgmt, *Management*
Mktg, *Marketing*
Math, *Mathematics*
ME, *Mechanical Engineering*
Mus, *Music*
NRES, *Natural Resources and Environmental Studies*
OMS, *Operations and Management Science*
Phil, *Philosophy*
PE, *Physical Education*
Phys, *Physics*
PBio, *Plant Biology*
Pol, *Political Science*
PSch, *Practical Scholar*
Psy, *Psychology*
PubH, *Public Health*
RelS, *Religious Studies*
REX, *Research Explorations*
Rhet, *Rhetoric*
Scan, *Scandinavian*
SeEd, *Secondary Education*
SW, *Social Work*
Soc, *Sociology*
Soil, *Soil Science*
SoAS, *South Asian Studies*
Span, *Spanish*
Spch, *Speech-Communication*
Stat, *Statistics*
TexC, *Textiles and Clothing*
WoSt, *Women's Studies*
YoSt, *Youth Development and Research*

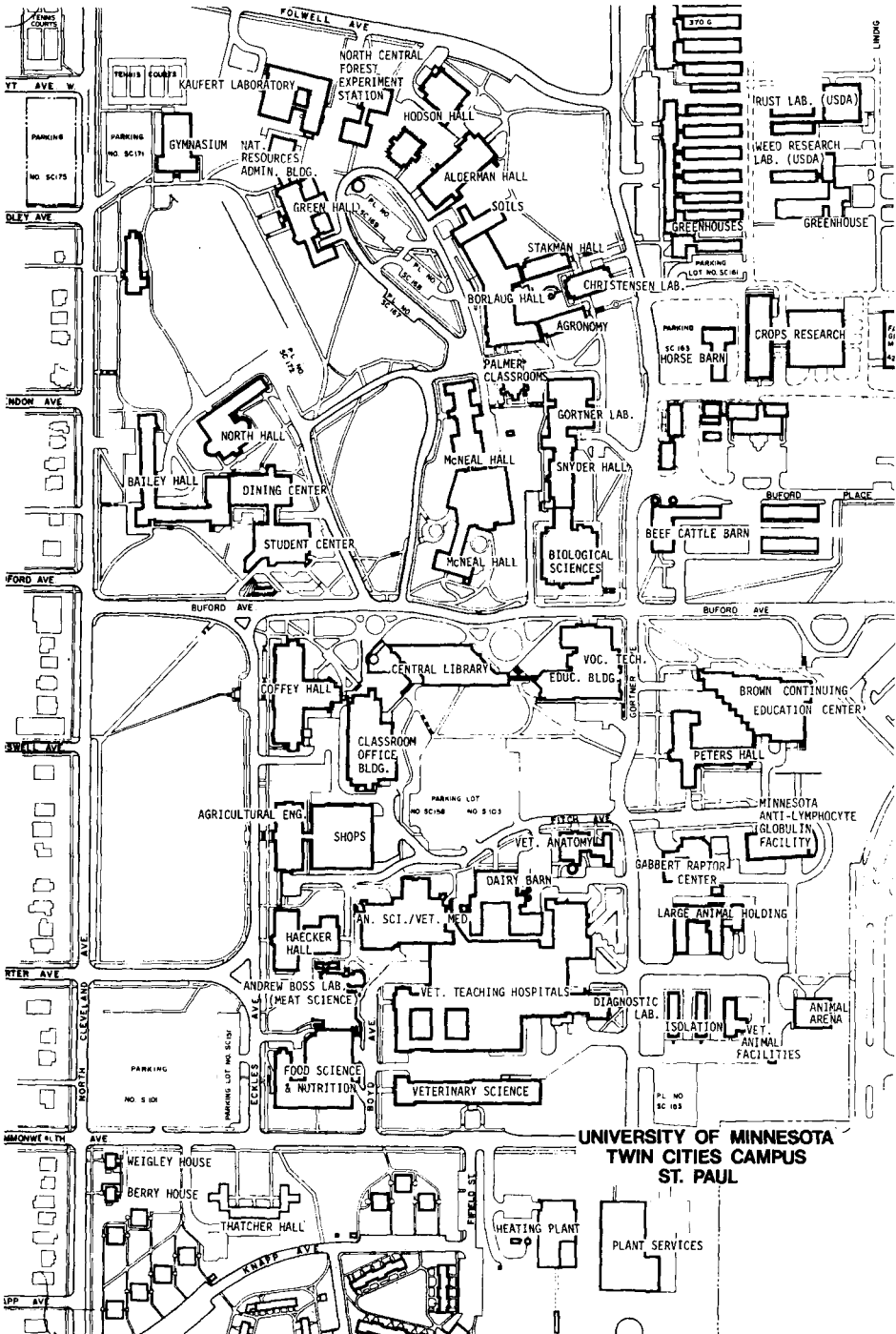


UNIVERSITY OF MINNESOTA
TWIN CITIES CAMPUS
EAST BANK

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INTERNATIONAL
EDUCATION

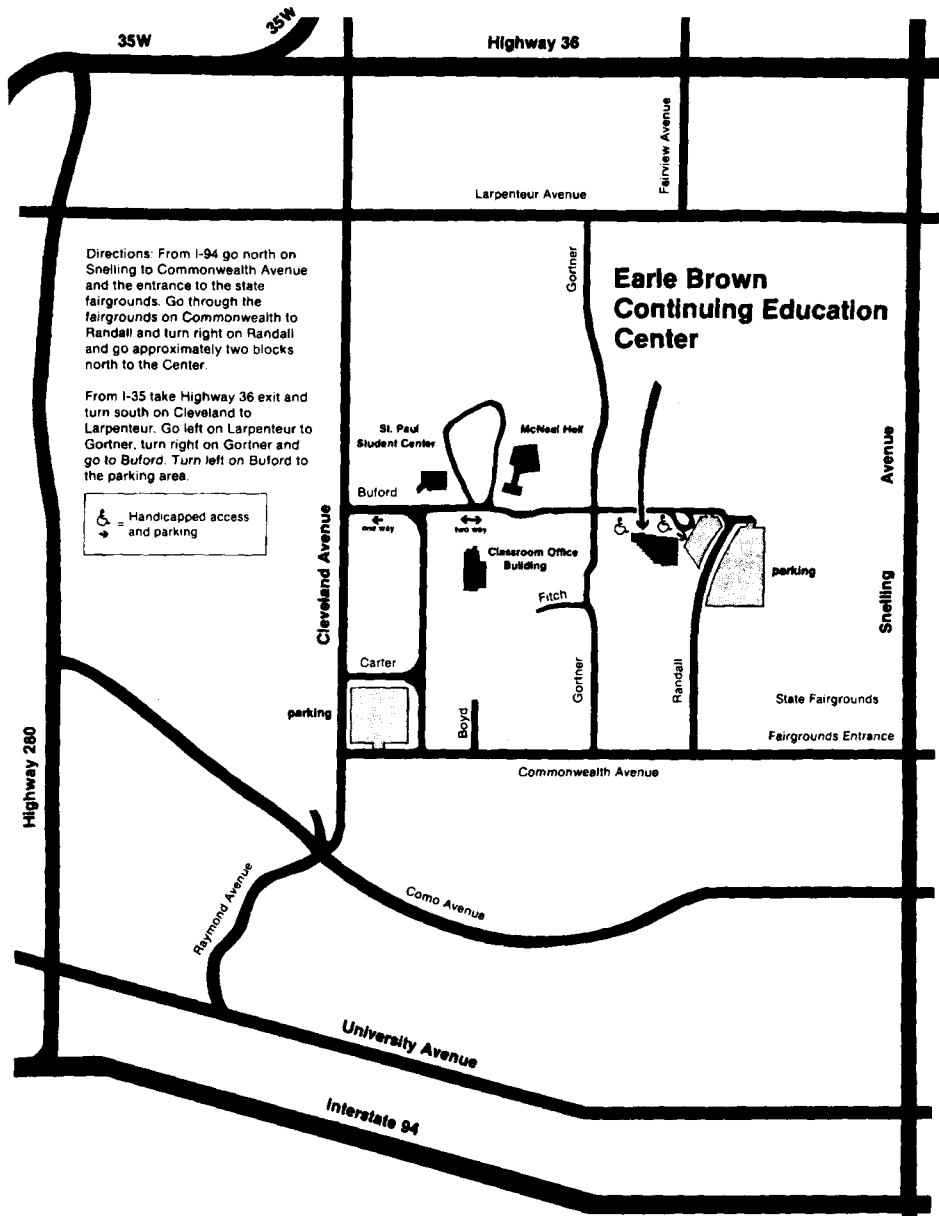
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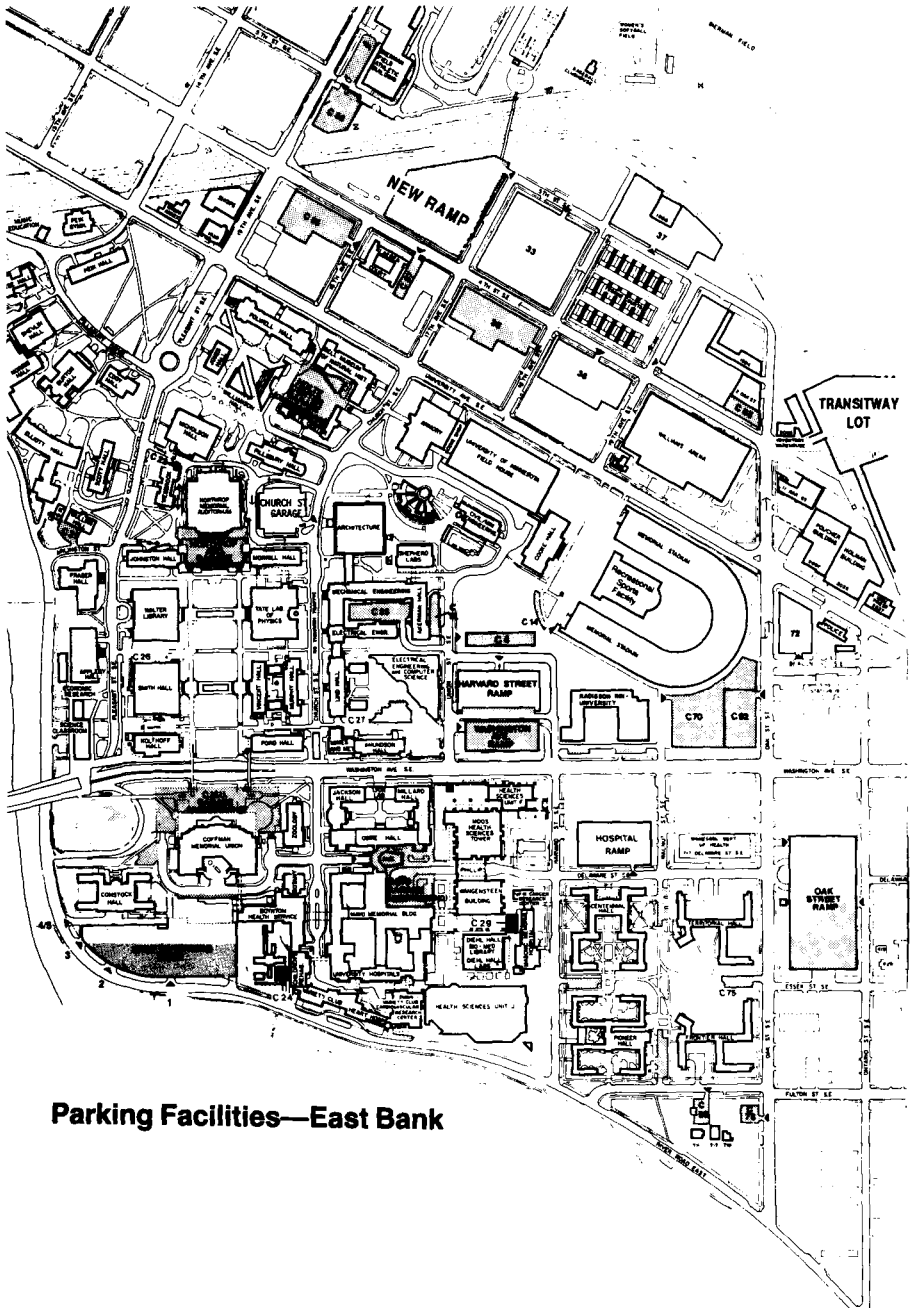


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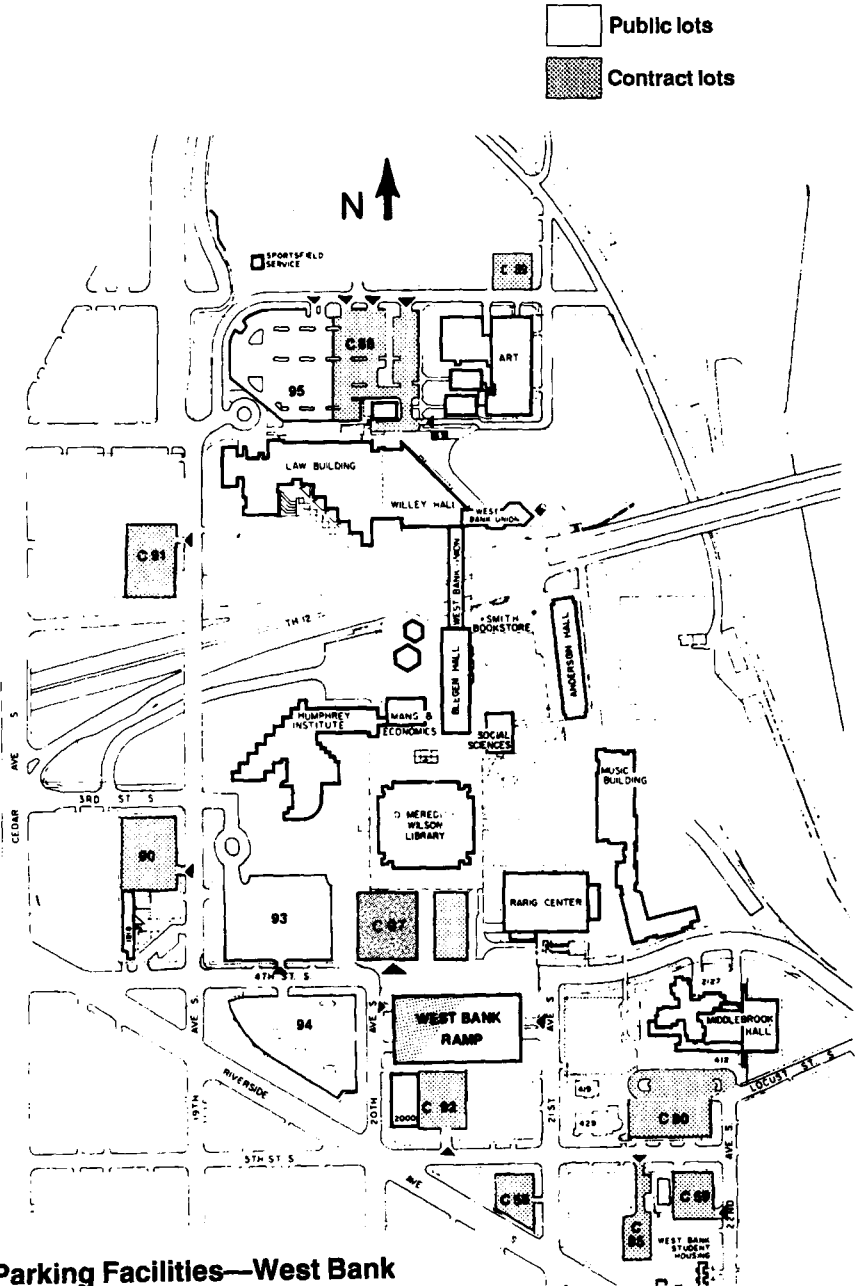
Parking Map



-  Public lots
-  Contract lots



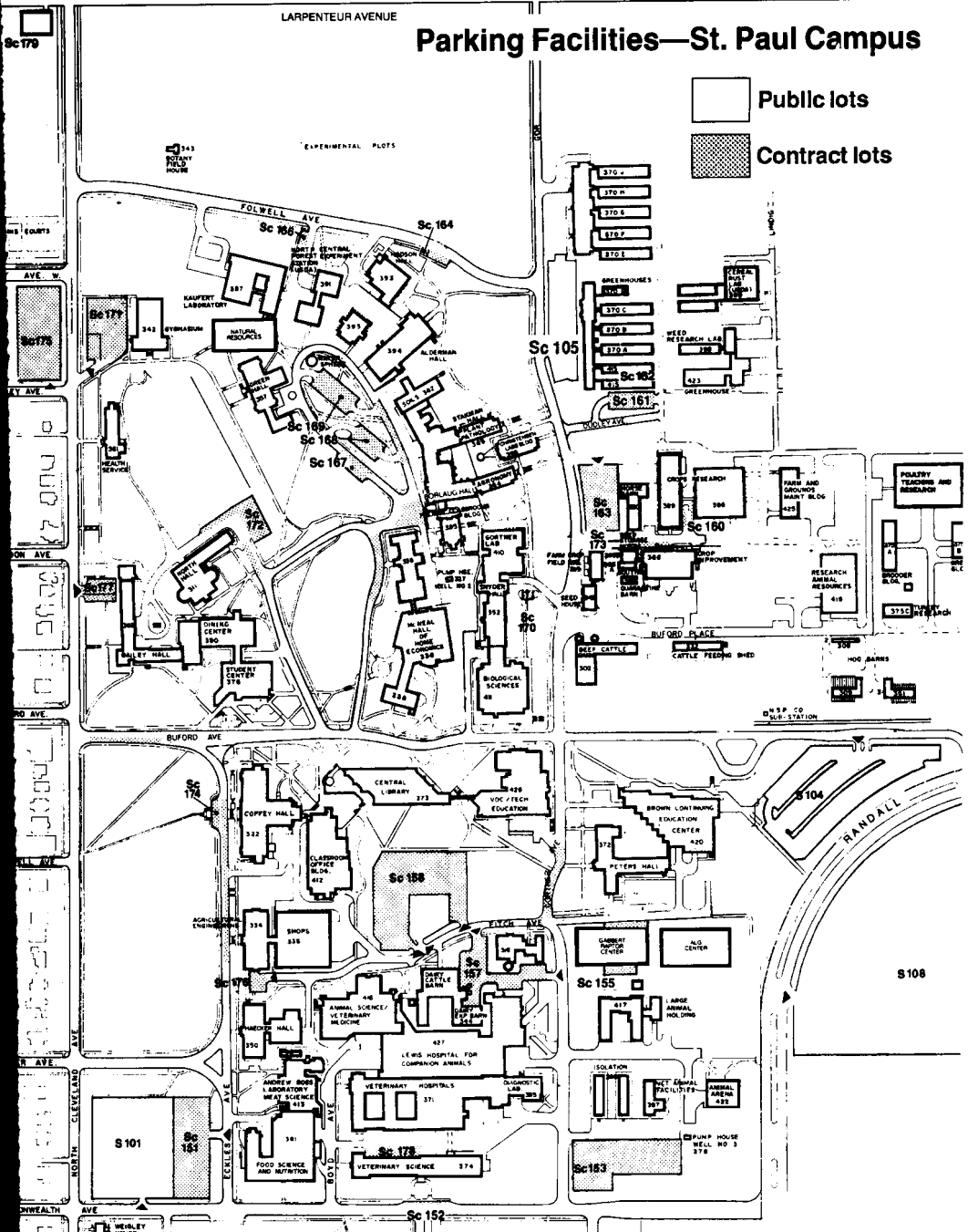
Parking Facilities—East Bank



Parking Facilities—West Bank

Parking Facilities—St. Paul Campus

- Public lots
- Contract lots



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The Global Campus

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Study abroad opportunities through the Global Campus provide exciting academic experiences that are surprisingly affordable. For about the same cost as full-time tuition, room, and board here at the University, you can spend a quarter studying abroad (not including travel costs). Most programs include group activities and excursions, and you can easily arrange for more travel on your own (at student discounts). Programs are cosponsored by academic departments and most credits can be applied to distribution, second language, or major/minor requirements for University degree programs. Financial aid applies.

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- Summer Program for Teachers of Spanish in Madrid, Spain
- Chinese in Tianjin, China

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- Architecture in China or Europe
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- Studio Arts in Greece

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For more information, contact the Global Campus at (612) 625-3379, FAX (612) 626-8009, or write The Global Campus, University of Minnesota, 106 Nicholson Hall, 216 Pillsbury Drive S.E., Minneapolis, MN 554550138.

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First Five-Week Term:

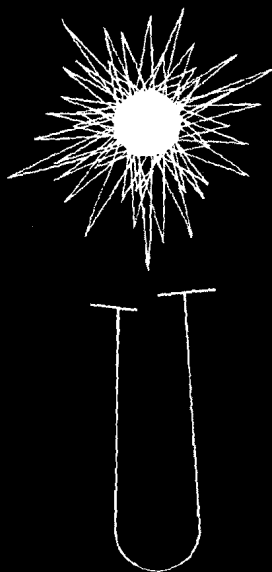
June 15 to July 20

Ten Week Term:

June 15 to August 25

Second Five-Week Term:

July 22 to August 25

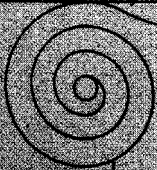
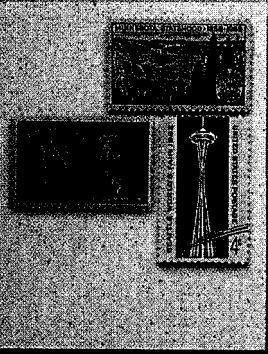


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Independent

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About the Cover

The cover for this bulletin was created by Minneapolis graphic designer Brad Norr as one of a series of covers for Continuing Education and Extension (CEE) bulletins. The cover presents images that represent both the academic and idealized aspects of the college experience (generally) and the CEE experience (specifically). It combines fine and commercial art techniques (acrylic painting, airbrush, tech illustration) with lithographic techniques (stripping, typography) and photography to form a hybrid image. Says Norr, "I love the work of the designers of the 1930s and 1940s, the way they combined illustration with great type and photography." After working for three years at a Minneapolis design firm, he started his own company, Brad Norr Design, in January 1992. His work has been recognized for excellence by the National University Continuing Education Association, American Corporate Identity, *Graphic Design: USA*, *Art Direction Magazine*, and *Print's Regional Design Annual*. Some of the work of his firm has been displayed in the Art Directors' Club Gallery in New York City.

Volume 96, Number 9

July 8, 1993

UNIVERSITY OF MINNESOTA

(USPS 651-720)

Published by the University of Minnesota, Office of the Vice President for Student Affairs, Publications and Communications Office, 110 Williamson Hall, 231 Pillsbury Drive SE, Minneapolis, MN 55455; once in May and June; twice in February, September, and October; three times in April; and five times in July. Second-class postage paid at Minneapolis, Minnesota. POSTMASTER: Send address changes to University of Minnesota, Independent Study, 45 Westbrook Hall, 77 Pleasant St. SE, Minneapolis, MN 55455.

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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

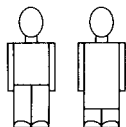
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Inquiries regarding compliance may be directed to Patricia A. Mullen, Director, Office of Equal Opportunity and Affirmative Action, University of Minnesota, 419 Morrill Hall, 100 Church St. SE, Minneapolis, MN 55455 (612-624-9547).



4 Ways to Register:

- in person



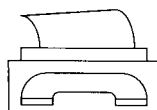
- by mail



- by phone



- by fax



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<p>For general information, please call the Department of Independent Study:</p> <p>612-624-0000 1-800-234-6564</p>	<p>For degree and certificate program advising, please call the CEE Counseling Office:</p> <p>612-625-2500</p>	<p>For registration by telephone (credit card only):</p> <p>612-626-8977</p>
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A Message from the President

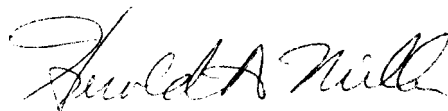
The University of Minnesota offers hundreds of academic programs. Unique among them is that provided by the Department of Independent Study. The program affords special opportunities to students of all ages and backgrounds, of all interests and geographic locations, to participate in the design and determination 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
University of Minnesota

A Message from the Dean

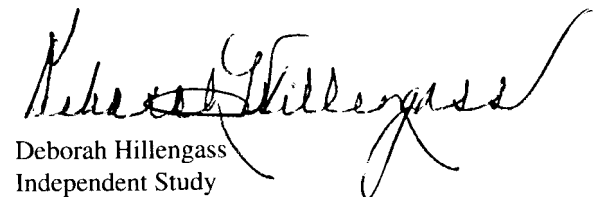
It's more than a matter of course. Although this bulletin lists almost 350 University of Minnesota courses that can be taken for credit, it should be said that these courses can be applied toward degree programs in several University undergraduate majors and minors or to fulfill general education requirements for graduation. So, whether you are taking an Independent Study course to fulfill degree requirements or to deepen your understanding of a particular field, successful completion of any of the courses in this bulletin is a good investment.



Harold A. Miller
Continuing Education and Extension

A Message from the Director

We welcome you as a potential student in the Department of Independent Study. It's a department with a proud history and a progressive future that currently offers nearly 350 courses by correspondence, TV, audiocassette, videocassette, and computers, and that has students from all walks of life and from all over the world. Independent Study has a large, innovative, and evolving program, and we hope you will find a course that suits your educational needs while giving you the opportunity to study at a time and place convenient for you. Thank you for considering Independent Study at the University of Minnesota.



Deborah Hillengass
Independent Study

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Welcome to the Department of Independent Study. Our policies and procedures are given in this section. To help you find the information you need, we have organized topics alphabetically, with cross-references in italics.

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 with the course descriptions in this bulletin. Most Independent Study courses may be started at any time and must be completed within one year from the date of registration. The following dates define quarter of registration:

6/14/93 through 8/25/93—summer
8/26/93 through 12/11/93—fall
12/13/93 through 3/19/94—winter
3/21/94 through 6/11/94—spring

Audio-Assisted Courses

Many Independent Study courses require audiocassettes, a helpful learning tool. Most audiocassettes can be purchased **only** from the Department of Independent Study. Descriptions of these courses and the cost of the required cassettes are given in the *Course Descriptions* section of this bulletin. These courses are marked with an audiocassette symbol:



If you order the cassettes at the time you register, fill in the appropriate space (Audio-tapes) on the registration form. Audiocassettes are not returnable for a refund. Minnesota residents must pay sales tax on audiocassettes (see *Taxable Items*).

If you do not want to buy the audiocassettes required for a course, you can listen to them or copy them (using your own blank tapes) at the Learning Resources Center, 15 Walter Library, Minneapolis campus. Please call 612-624-1584 to check on the availability of audiocassettes and on the Learning Resources Center's open hours.

Cancellations

If you cancel your course registration within six weeks of the date you registered, that course will not appear on your transcript. You 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 your transcript. **Simply not submitting assignments does not constitute cancellation; you will receive an F or N grade if you do not cancel officially.** Use the cancellation form included with your study guide. Cancellations 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 (CEE) Scholastic Committee. The CEE Scholastic Committee strives to assure the integrity of student grade records by maintaining fair and consistent registration, withdrawal, and grading policies for all students. Approval from the CEE Scholastic Committee is granted only under extenuating circumstances. College guidelines for cancellation will be strongly considered for students who are admitted to a degree program at the University of Minnesota. Students may request a petition form by contacting Independent Study or CEE Counseling by phone or mail (see *Counseling and Advising Services*).

Cancel/Add

You may cancel out of one Independent Study course and add another Independent Study course following the policies given above. Before you cancel/add, indicate that you want any tuition refund you may be entitled to applied to the tuition for the new course.

Discontinued Courses

Because supplies, books, or an instructor may no longer be available for a specific course, sometimes it is necessary for Independent Study to stop accepting enrollments and reinstatements in that course. If you mail in a registration form or a reinstatement request for a course that has been discontinued, your tuition or reinstatement fee will be returned or, if requested, applied to another course with the same tuition or reinstatement fee.

Refunds

Part of your tuition can be refunded if:

- you cancel within 90 days of the date of registration,
- you have not submitted more than half of the assignments in the course, and
- you are up-to-date on your payments (for students using the partial payment plan).

The following items are not refundable:

- Study guides, tapes, lab kits, and special equipment
- \$8 service fee (for students using the partial payment plan)

Refund schedule:

100% tuition refund less \$20 cancellation fee—registration day through day 30 (no assignments submitted)

75% tuition refund—registration day through day 30 (from one assignment submitted through half of the assignments submitted)

50% tuition refund—day 31 through day 60 (from no assignments submitted through half of the assignments submitted)

25% tuition refund—day 61 through day 90 (from no assignments submitted through half of the assignments submitted)

No refund—day 91+

The refund process takes approximately five weeks.

Counseling and Advising Services

The CEE Counseling office offers academic advising and financial aid advising services free of charge 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 also available, for a fee (VISA and MasterCard accepted), to assist individuals 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 or counselor by phone. Advisers also can be contacted by mail at the following address:

CEE Counseling
University of Minnesota
314 Nolte Center
315 Pillsbury Drive SE
Minneapolis, MN 55455

CEE Certificates

See the *CEE Certificate Programs* section.

Computer-Assisted Courses

Several Independent Study courses now use computer software as an interactive learning tool. More information about taking these courses is given in the *Technology-Assisted Courses* section of this bulletin. The courses are described in the *Course Descriptions* section, where they are marked with a computer symbol:



Course Completion

Also see *Textbooks and Supplies; Cancellations; Reinstatement; Reenrollment*.

A minimum of six weeks is required to complete an Independent Study course. The six weeks begin the date you submit your first assignment, **not** the date of registration. **Expect to spend a minimum of three months to complete** an Independent Study course.

Buy the required texts/supplies immediately because text editions may be updated by publishers, and you may not be able to obtain the texts/supplies at a later date. In this situation, you will not be able to complete the course or reinstate in it.

Make a copy of each assignment you submit; **attach the correct computerized submission form** to each assignment, exam, or paper; and **attach a preprinted mailing label** to the envelope. **Do not send assignments directly to your instructor.**

You may submit a maximum of two assignments, exams, or papers per week. By doing so, you may consider any comments from your instructor and recognize your mistakes and strengths.

Allow approximately two weeks between the time an assignment is received by Independent Study and the time it is placed in the return mail. Failure to include the correct computerized submission form, insufficient postage, or lack of zip code may delay the processing of a submission beyond the two-week period. Contact Independent Study regarding any assignment not returned within three weeks from the date it was submitted.

You have one year to complete most Independent Study courses. If you cannot complete the course in one year, you may reinstate (extend your enrollment) in most Independent Study courses for one additional year. If you do not reinstate by the expiration date, a grade of F or N will be placed on your transcript. (See *Reinstatement*.)

Allow three weeks from the date you complete a course for the course grade to be recorded on your transcript in the Office of the Registrar.

Credits

The University of Minnesota uses the quarter hour as the basis of credit evaluation. A quarter hour equals approximately two thirds 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. 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 your own institution before enrolling. University of Minnesota students should consult an adviser in their major department (see the *University Degree Programs* section).

No Credit. Although grades may be assigned, no credit is given for some courses. (Also see *Credit Course on a Noncredit Basis* below.)

Resident Credit. The courses listed in this bulletin parallel or are equivalent to courses with the same title and course number offered in day classes at the University. Through action of the University Senate, Independent Study credits are considered resident credits. Some colleges, however, have restrictions on how many Independent Study credits can be used in degree programs or toward college residency requirements.

Graduate Credit. Also see the *University Degree Programs* section, *Graduate School*. Several Independent Study television courses are offered for graduate credit. If you want graduate credit, enroll in the television version of the course (not the video version), and pay the correct graduate tuition (see *Tuition*). Check with an adviser in your department to see whether Independent Study courses count toward your graduate program. See the *Technology-Assisted Courses* section for courses and broadcast schedules; then check the *Course Descriptions* section for tuition and other information.

Credit Course on a Noncredit Basis. Simply write NC (noncredit) in the Credits column of the registration form. Usually instructors expect the same quality and quantity of work and will grade both credit and noncredit students on the same basis. To change from a noncredit to a credit registration, see *Cancellations*. Enrollment in a credit course on a noncredit basis requires payment of the full amount of tuition. Noncredit registration **cannot** be used toward degrees or certificates.

Credit by Exam. This method is primarily recommended for students who want to earn credit for their extensive knowledge in a specific subject area and who can demonstrate proficiency by successfully completing the required exam(s) for a course. Contact Independent Study to see if credit by exam is authorized for the course you want. You may be asked to provide the following information in addition to the completed registration form and payment:

- a letter describing your background and reason for choosing this method
- a transcript of all college-level work

The tuition for credit by exam is \$50 (payment in full). You may take your exams either at the offices of Independent Study or under the supervision of an approved proctor (see *Examinations*).

DANTES

The Defense Activity for Non-Traditional Educational 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 the *University Degree Programs* section.

Disability Services

If you have a disability and need reasonable accommodation to do the work of your Independent Study course, first contact Disability Services, 16 Johnston Hall, 101 Pleasant St. SE, Minneapolis, MN 55455; phone 612-624-4037 voice or TDD.

Independent Study and Disability Services will then coordinate efforts to provide or arrange accommodation. Such accommodations can include more time to complete an exam, audiotaping a required text, providing a study guide on computer disk, or having an instructor provide taped rather than written comments on a student's work. These accommodations can help remove the academic barriers to earning University credits through Independent Study.

Wesbrook Hall, where Independent Study is located, has an access ramp on the west side of the building (facing Pleasant Street) and an elevator.

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. Be sure to bring the correct computerized submission form (marked with a number and the word *exam* for midcourse exams and a number and the word *final* for final exams) and attach it to the exam when you submit it for grading.

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. No appointment is necessary during regular office hours (8 a.m. to 4:30 p.m., Monday through Friday). If you want to take an examination on a Tuesday or Thursday evening (from 4:30 to 8 p.m.), you should call 624-0000. You must be finished with an exam by 8 p.m. The Independent Study office will also be open from 9 a.m. to 1 p.m. one Saturday before each quarter: September 11, 1993; December 11, 1993; and March 12, 1994. You must call at least one day in advance and make an appointment to take an exam in the evening or on a Saturday. Students in the Twin Cities area are urged to take their examinations at the office 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, 218-726-8809

Morris: Regional Advising Service, 232 Community Services Building,
612-589-6456 and 1-800-842-0030
Rochester: 855 SE 30th Avenue, 507-280-2828, 612-624-2263, and
1-800-947- 0117

3. The Independent Study department of any member institution of the National University Continuing Education Association (NUCEA) or of the institution of a member belonging to the American Association for Collegiate Independent Study (AACIS). (See *Professional Associations*.)
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.

Independent Study reserves the right to reject any supervisor. 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 (and a computerized submission form) is included in the course study guide. To take your examinations at locations other than the offices 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 proctor at his or her business location and must be taken within 30 days.

Faculty

The authors and instructors for all Independent Study courses are approved by the University academic departments through which the courses are offered. In most cases, Independent Study authors/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. The authors/instructors are listed after each department or subject area in the Course Descriptions section of this bulletin.

Fees

See *Tuition; Postage*.

Financial Aid

Financial Aid Advising—If you have questions or problems with financial aid, please write or call CEE Counseling, University of Minnesota, 314 Nolte Center, 315 Pillsbury Drive SE, Minneapolis, MN 55455; 612-625-2500.

Important Registration Dates—If you are receiving financial aid or verifying enrollment for deferment of student loan payments, your registration must fall within the starting and ending dates for the corresponding quarter. The following dates define quarter of registration:

6/14/93 through 8/25/93—summer
8/26/93 through 12/11/93—fall
12/13/93 through 3/19/94—winter
3/21/94 through 6/11/94—spring

If you are deferring repayment of a student loan awarded in a previous year, you need to enroll at the level of enrollment specified by your lender and then register for additional credits each new quarter. (Example: If you enroll half-time fall quarter, you must register for at least six additional credits winter quarter and for at least six more credits spring quarter.)

Independent Study students may be eligible for the financial aid programs listed below.

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 Part-Time Student Grant Program—The Minnesota Part-Time Student Grant Program (MPTSGP) has been merged with Minnesota State Grant.

Minnesota State Grant—Minnesota State Grant (MSG) 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 3-14 credits per quarter (no additional registration through Extension classes or day school); and demonstration of financial need. In addition, applicants must not have already earned a bachelor's degree and must not have completed more than four years of education on a full-time basis beyond high school. If you are unable to pay your tuition and fees prior to disbursement of your MSG funds, contact a financial aid adviser in CEE Counseling for information about delayed payment. To be considered for delayed payment, your record at the University of Minnesota must show eligibility for the Minnesota State Grant award and must be free of tuition and other selected holds. Applicants use the Free Application for Federal Student Aid (FAFSA), which is available at CEE Counseling, 314 Nolte Center (612-625-2500).

CEE Tuition Assistance Program—This program is for part-time adult students who have financial need but are ineligible for other grants, scholarships, or tuition reimbursement, or whose financial aid falls short of covering tuition, fees, and books. Applicants must reside in Minnesota, be U.S. citizens or permanent residents, not have a bachelor's degree, and have a gap of at least three years in their education. The years counted in the gap do not need to be consecutive. Eligibility is based on current income, household size, and special expenses. Applicants must be admissible to the University of Minnesota and maintain satisfactory academic progress. TAP awards cover tuition and books for one or two classes a quarter. For additional information or an application, contact CEE Counseling, 314 Nolte Center (612-625-2500).

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, 16 Johnston Hall (612-624-4037), or from local Department of Rehabilitation Services offices.

The Remington Scholarship—The Gilford and Esther Remington Scholarship Fund was 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. Applicants must be U.S. citizens or permanent residents, reside in Minnesota, be admissible to the University of Minnesota, and have an interruption or delay in their education of at least three years. The years counted in the gap do not need to be consecutive. Awards are made on the basis of financial need, academic ability, and the strength of a personal statement. Preference will be given to students in the fields of history, education, art, and audiovisual education. The application priority deadline is July 9, 1993. If funds remain available, applications will be accepted until August 6, 1993. To obtain an application, contact CEE Counseling, 314 Nolte Center (612-625-2500).

Military Veterans—To satisfy Veterans Administration requirements, veterans registering under the G.I. Bill must enroll in courses that are applicable to a 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; and Reserve and National Guard Educational Program (Chapter 106)**. Educational plans and transcripts of all college work must be reviewed with a CEE adviser before Independent Study can certify registration to the Veterans Administration. Veterans who are not yet admitted to a degree program will be held to the CEE academic progress standards described below. Advisers can be reached at 612-625-2500 or by writing Veterans Adviser, CEE Counseling, University of Minnesota, 314 Nolte Center, 315 Pillsbury Drive SE, Minneapolis, MN 55455.

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 review period 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. Additional information is available at CEE Counseling, 314 Nolte Center, 612-625-4334. Students who are **not** 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 not registered for at least one credit within six consecutive quarters will be withdrawn from their certificate program. Students are encouraged to contact an academic progress adviser at 612-625-2500 for further information and assistance in reviewing options, study skills, and steps that might improve academic standing.

Most programs limit enrollment to part-time study. Students cannot use Federal Pell Grant, Federal Stafford Loan, and other educational loans, or campus-based aid (Federal and State College Work-Study; Federal Supplemental Educational Opportunity Grant; Federal Perkins Loan; University grants, loans, and scholarships administered by the Office of Student Financial Aid) for Independent Study.

Grades

Also see *Course Completion; Reinstatement*.

The University uses the A-F and S-N grading systems. On your registration form, indicate on which system you want to be graded. You may change to another system at any time before submitting assignment 3. If there is a grading system restriction for a course, it is indicated in the course description. Your course grade is sent to you when you complete 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 a specific course are usually outlined in the study guide for that course. Questions and problems concerning grades earned in Independent Study should be sent to the Administrative Director, Department of Independent Study.

A-F Grading System

There are four passing grades in the A-F system: A, B, C, and D. In almost all cases, major coursework must be completed on the A-F system. A grade of F indicates unsuccessful completion of the course. A grade of D, while a passing grade, reflects substandard work and must be balanced by grades of A or B in order to maintain satisfactory academic progress. (See *Financial Aid* for more information.)

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 letter N, which stands for no credit, is assigned when a student does not earn an S. Each college has limitations on 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 CEE Counseling 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 credits.

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 attempted. Credits earned in classes taken on the S-N grading system are not usually included in determining grade point average. CEE Counseling has written instructions on how to compute your grade point average; to request a copy of these instructions, call 612-625-2500.

Health Care Courses and Programs

Independent Study administers a number of special programs in the public health care field.

Independent Study Program (ISP)

ISP is an executive study program for health care administrators. Through combined correspondence and on-campus study, ISP offers educational opportunities for practicing executives to link their practice to academic principles. A two-year Certificate of Management Study, a three-year Certificate of Advanced Management, and a master's (MPH/MHA) option are offered. Vernon E. Weckwerth, Ph.D., is the director of this

program. ISP program areas include Ambulatory Care Administration, Hospital Administration, Patient Care Administration, and Special Interest Groups in Long Term Care and Mental Health/Chemical Dependency. For more information, call or write: Program Associate, ISP, 420 Delaware St. SE, D305 Mayo, Box 97, Minneapolis, MN 55455; telephone 612-624-1411; fax 612-626-1186.

Long Term Care

Independent Study also administers courses for students seeking to qualify for nursing home administrator licensure in Minnesota. These courses are offered through the Center for Long Term Care Administration. They are a combination of on-campus seminars and correspondence study. The 30-credit sequence is designed to help students fulfill course content requirements specified by Minnesota licensure regulations. The coordinator of this program is George K. Gordon, Ed.D. For more information, call or write: Center for Long Term Care Administration, 420 Delaware St. SE, D383 Mayo, Box 97, Minneapolis, MN 55455; telephone 612-624-5159; fax 612-624-3972.

High School Courses

See the *High School Program* section.

Immunization

Students born after 1956 who take more than one University class are required under Minnesota law to submit an Immunization Record form. The 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.

Incompletes

See *Course Completion; Reinstatement*.

Inter-College Program

See the *University Degree Programs* section, *University College*.

International and Overseas Students

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 lesson assignments and exams without difficulty.

The Department of Independent Study does not employ commercial agents abroad. You must pay all fees in American currency. Mail your registration form—along with payment for tuition, texts/supplies, tapes, postage—directly to Independent Study. Videocassettes and certain other supplementary materials cannot be sent overseas. For complete information regarding overseas lesson service, see *Postage*.

Lesson Service

See *Course Completion*.

Library and Audio/ Video 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 libraries on the St. Paul campus 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/course confirmation form. Students who reinstate in a course must present proof of reinstatement at the library to withdraw books.

University Film and Video—This department provides audio/video materials as learning resources for students to 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 copies of the audiocassettes and videocassettes that are required for Independent Study courses. Any interested person can use its listening and viewing facilities or can make copies of its audiocassettes. Please call ahead to check on the availability of course cassettes and open hours.

Learning Resources Center
15 Walter Library
Minneapolis campus
612-624-1584

Minnesota College Libraries—Many Minnesota colleges and universities will extend library privileges to Independent Study students who show a fee statement/confirmation of 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 who need assistance in identifying or locating library resources may call 612-624-4002.

Office Hours

The Department of Independent Study office is open Monday through Friday, 8 a.m. to 4:30 p.m., throughout the calendar year. Telephone registrations (612-626-8977) will be taken from 8 a.m. to 3:30 p.m. On Tuesdays and Thursdays, office hours are extended in the registration office in room 45 Wesbrook Hall until 8 p.m., with minimal service after 4:30 p.m. During the extended hours staff members will accept registrations, assignment submissions, cancellations, reinstatements, and other transactions for processing the next day, will provide general information, and will proctor exams for students who have made an appointment to take an evening exam (see *Examinations*).

The registration office will also be open from 9 a.m. to 1 p.m. one Saturday before each quarter: September 11 and December 11, 1993, and March 12, 1994. On those three Saturdays, CEE counselors will be available in Wesbrook Hall to answer student questions.

The department is closed on the following holidays:

July 5, 1993	Independence Day holiday
September 6, 1993	Labor Day
November 25, 1993	Thanksgiving Day
November 26, 1993	Friday after Thanksgiving
December 23, 1993	Christmas holiday
December 24, 1993	Christmas holiday
December 31, 1993	New Year's holiday
January 17, 1994	Martin Luther King Day
March 25, 1994	Floating holiday
May 30, 1994	Memorial Day

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 writing handbook.

Plagiarism also refers to copying another student's lesson assignment or paper 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 academic dishonesty. Plagiarism is a violation of the University's student conduct code and will be dealt with by the Independent Study faculty and/or the office for Student Judicial Affairs.

Postage

Students pay postage on all mail sent to Independent Study. The department pays for delivery of the study guide (for students who enroll by mail) by fourth-class mail and the return of corrected lesson assignments by first-class mail. If your address does not have a U.S. zip code or an APO/FPO, you must pay for airmail delivery of texts/supplies and airmail return of assignments and exams*.

Overseas students must pay for lesson assignments, texts/supplies, tapes to be sent airmail by enclosing special fees* with their registration. Students must assume financial responsibility for the loss of texts and materials sent overseas.

Fill in the appropriate space on the registration form and include the postage fee. Independent Study charges the following postage/handling fees **per course**:

- Fourth-class postage/handling for texts/supplies \$ 8.00
- First-class postage/handling for texts/supplies \$12.00
- Airmail postage/handling of texts/supplies \$34.00*
- Airmail postage/handling to return lesson assignments/exams \$12.00*
- Express Mail, UPS, and other carriers **cannot** be used by Independent Study.

Post-Secondary Enrollment Options Act

See the *High School Program* section.

Professional Associations

The Department of Independent Study is a member of the Independent Study Division of the National University Continuing Education Association (NUCEA). The division publishes *The Independent Study Catalog*, which lists Independent Study courses offered by 71 colleges. It is available from Peterson's Guides, P.O. Box 2123, Princeton, NJ 08543-2123. Write to Peterson's Guides for the price of the catalog. You can look at a copy of the catalog at the Department of Independent Study, 45 Wesbrook Hall, if you wish. It may also be available at your local library.

In addition, many of the staff at Independent Study belong to the American Association for Collegiate Independent Study (AACIS). AACIS is a professional organization for people engaged in or interested in collegiate independent study. Its primary focus is the professional development of its members through annual workshops, a newsletter, and networks—personal, telephone, and e-mail—so that they can produce the highest quality courses and services for students.

Program Clusters

Program clusters are non-certificate interdisciplinary groups of courses with related subject matter. The clusters were designed to enable you to bridge courses and disciplines and to see the interdependence of different bodies of knowledge. For more information, see the *Program Clusters* section.

Program for Individualized Learning

See the *University Degree Programs* section, *University College*.

Reenrollment

If you did not complete an Independent Study course, because, for example, your course expired and you received a grade of F or N, or a reinstatement is not possible in that version of the course (see *Reinstatement*), and you would like to take the same course again, you must reenroll in the course. To reenroll you must fill out a registration form, pay 1993-94 tuition rates, buy the current required texts/supplies, and complete all the assignments and exams in the newest version of the course study guide.

Refunds

See *Cancellations*.

Reinstatements

If you do not complete your course within the first year, you may extend your enrollment for one additional year in most courses. To obtain a reinstatement, submit a written request (or use the Reinstatement Request form included with your study guide), and pay the \$40 reinstatement fee **before** your expiration date. You may reinstate only once per course. **Sometimes, however, reinstatements are not possible** because of a change of instructor, changes in course content/requirements, etc.

If you reinstate, a grade of I (incomplete) will be placed on your transcript. If you complete your course within the one- year reinstatement period, 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 expiration date (either the original or the extended date), a permanent grade of F or N will be placed on your transcript.** Then you can earn credit in the course only by reenrolling (see *Reenrollment*).

Senior Citizens in Minnesota

Minnesota residents 62 years of age or older may register for Independent Study noncredit courses at no cost, and in credit courses for a fee of \$6 per credit. Senior citizens who enroll in credit courses for no credit (see *Credits, Credit Course on a Noncredit Basis*) must also pay the \$6 per credit fee. Registrants are required to pay for the study guide, texts and supplies, and other required materials, and provide a photocopy of an ID. For further information, telephone 612-624-0000 or write to the Department of Independent Study.

Social Security Number

Independent Study uses a student's Social Security number as an identification number. Supplying this number is voluntary; however, it is helpful in insuring accurate access to your records and avoiding duplicate mailings. If you have a University of Minnesota ID number, also put that number on the Independent Study registration form. If you do not fill in your Social Security number and do not have a University of Minnesota ID number, Independent Study will have an ID number assigned to you.

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 any of these programs, call the phone number given below. Students who are also enrolled in Extension classes may count Independent Study credits as part of their total credit load. You **cannot** use your credit card to pay for student services.

Athletic tickets (624-8080)
CEE student board (626-8501)
Health service (625-8400)
Intercampus bus service (625-9000)
Library (624-4552) (Also see *Library and Audio/Video Facilities*)
Parking Services (625-6566)
Recreational facilities (625-6800)
University Senate (626-8501)

Study Guides

You are required to purchase the study guide for most audio-assisted and video-assisted courses; the cost is given with the course description. Fill in the Study Guide line on the registration form. You are not required to pay for the study guide for most other Independent Study courses.

If you are not enrolling in a course but would like to purchase a study guide, contact the Department of Independent Study for price and availability.

Symbols

To make it easier for you to find new courses or courses that require the use of electronic educational materials, they are highlighted by symbols. Also see *Audio-Assisted Courses* and *Video-Assisted Courses* in this section, and *Television Courses* and *Computer-Assisted Courses* in the *Technology-Assisted Courses* section

New course:



Computer-assisted:



Video-assisted:



Audio-assisted:



TV:



Taxable Items

Minnesota residents are required to pay sales tax on some supplies used in Independent Study courses. Minneapolis residents (or those who purchase supplies at Independent Study's offices) have to pay the Minneapolis sales tax rate. If you are ordering taxable supplies, fill in the appropriate space on the registration form.

Taxable items:

- audiocassettes
- lab kits
- special materials
- computer disks

Nontaxable items:

- textbooks
- videocassettes

You are encouraged to order your texts/supplies at the time you register; if you want to know whether or not to include tax on a specific item, call Independent Study.

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 can call the Internal Revenue Service at 612-644-7515. Persons living outside the Twin Cities area can call (toll free) 1-800-829-1040.

Teacher Certification

See the *University Degree Programs* section, *College of Education*.

Television Courses

Television courses will be broadcast in the Twin Cities (KTCI, Channel 17), Appleton (KWCM, Channel 10), Austin (KSMQ, Channel 15), and Duluth (WDSE, Channel 8) during fall, winter, and spring quarters. For a complete broadcast schedule and list of television courses, see the *Technology-Assisted Courses* section.

Textbooks and Supplies

It is important to **purchase the required texts/supplies used in a course when you register** and to begin submitting assignments soon after you register. Because text editions may be updated by publishers, the required texts/supplies may become unavailable at a later date. In this situation, you will not be able to complete the course, will not be allowed to reinstate your registration, an F or N will be placed on your transcript, and therefore you will have to reenroll if you want to earn credits for the course.

Textbooks and supplies needed for a course are listed in the course study guide. Tuition does not cover the cost of texts and supplies.

You can buy your texts in person at the Information counter in the Minnesota Book Center (Williamson Hall, Minneapolis campus) or by mail through Independent Study. To order books by mail, mark the appropriate spaces on the registration form and add the amount for the texts (given in the course description) plus the appropriate postage/handling fee (see *Postage*) to your tuition check. The price of new texts/supplies is given in the *Course Descriptions* section of this bulletin. Sometimes only used texts are available, at a reduced price. If only a used text is available, the price difference between a new and a used text will be refunded to you. Allow two or three weeks for delivery of texts and supplies. Study guides, lab kits, tapes, and special equipment are **not** returnable for refunds.

Students who want to **sell their books after completing a course** should contact the Minnesota Book Center, University of Minnesota, Williamson Hall, 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 you cancel your course registration within **three months** of the date of registration, have **not** submitted any lesson assignments, and have not written in your texts. A textbook is considered used or a buy back if there is any writing in it. If a student cancels a course after three months, his or her books will be considered buy backs.

Procedures for returning books after canceling registration in a course are given below.

- If you purchased books in person at the Minnesota Book Center, obtain a Textbook Return Form at Independent Study for verification of cancellation. Then bring the verification and your texts to the Minnesota Book Center, where your refund will be processed.
- If you ordered your books by mail, bring or send your texts to Independent Study, where your cancellation will be verified and your refund processed. The refund process takes approximately five weeks.

Transcripts and Records

Two types of services are available to obtain official transcripts: regular service and rush service. (Official transcripts are certified and signed by the University Registrar.) Regular service is available for \$3 per transcript 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 \$9 per transcript 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 (U of M student ID or current passport or driver's license) to receive over-the-counter rush service.

Official transcripts can be requested by mail or in person. No telephone requests are accepted. Requests should include your full name, your signature, Social Security number, date of birth, dates of enrollment, and complete address(es) where the transcripts should be mailed. Send your requests to (or drop them off at) the Office of the Registrar, University of Minnesota, 150 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 \$9 a transcript.

You may pick up an unofficial copy of your record by visiting the quick-service window in 150 Williamson Hall. A picture ID is required. There is no charge for the quick-service request, but there is a limit of one copy per day.

Independent Study grades are automatically recorded for undergraduates on their University of Minnesota transcript. Graduate and professional school students must petition for transfer of Independent Study credits to graduate or professional school records.

A grade slip is sent to you when you complete an Independent Study course. If you want a transcript that includes your Independent Study grade, 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 a student generally may not be released to a third party without the student's permission. (Exceptions under the law include state and federal educational and financial aid institutions.) The policy also permits students to review their educational records and to challenge the contents of those records.

Some student information—name, address, electronic (E-mail) address, telephone number, dates of enrollment and enrollment status (full-time, part-time, not enrolled, withdrawn and date of withdrawal), college and class, major, adviser, academic awards and honors received, and degrees earned—is considered public or directory information. Students may prevent the release of public information only during their terms of enrollment. To do so, students must notify the records office on their campus.

Students have the right to review their educational records. The regents' policy, including a directory of student records, is available for review at 150 Williamson Hall, Minneapolis, and at records offices on other campuses of the University. Questions may be directed to the Office of the Registrar, 150 Williamson Hall, 612-625-5333.

Tuition

Tuition for Independent Study courses is \$70.00 per credit for 0000- and 1000-level courses. The tuition for 3000- and 5000-level courses varies by school. Tuition and fees are subject to change without notice, and also subject to approval by the Board of Regents. The tuition for each course is listed with the course description. Texts and supplies are not included in the tuition and must be purchased separately (see *Textbooks and Supplies; Postage*). 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 for specified broadcast television courses (see the *University Degree Programs* section, *Graduate School*) pay graduate tuition. Two graduate tuition rates are listed with each of these courses in the *Course Descriptions* section. The first is for students using the course in a University of Minnesota Graduate School program (marked "Grad. School, U of M"); the second is for students using the course in a graduate program at the College of Education (M.Ed.), School of Public Health (M.P.H.), School of Social Work (M.S.W.), or at another institution (marked "grad rate, other schools").

There are several ways to pay the tuition for an Independent Study course.

Check or Money Order

Please make your check or money order payable to the University of Minnesota.

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 canceled, and
2. a hold will be placed on your University record until you pay **all** of the following:
 - a. a \$20 check handling fee
 - b. a \$20 course cancellation fee or 25% to 100% of tuition (depending on registration date and the number of assignments submitted)
 - c. the \$8 partial payment fee (if applicable)
 - d. the cost of the course study guide, supplies, and texts (if applicable)

Credit Card

You can use your Visa or MasterCard to pay for the tuition, fees, and texts/supplies for an Independent Study course. Credit card payment can be used only with the Full Payment Plan; it **cannot** be used with the Partial Payment Plan or reinstatements. 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/supplies (if you want to purchase them at the time you register), postage/handling (see *Postage*), and tax. Be sure to check the box labeled Full Payment and fill in the lines labeled Credit Card Information on the registration form. When you fill in the Credit Card Information, check whether you're using VISA or MasterCard and have the credit card holder sign on the appropriate line.

Partial Payment Plan

Under this plan, one-third of the total tuition, plus a service charge of \$8 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. This plan does not apply to tuition paid by credit card. The payment schedule (including the \$8 service charge) for 1000-level courses is given below:

Tuition	1st payment (at registration)	2nd payment (30 days)	3rd payment (60 days)
\$210 (3 cr. @ \$70/cr.)	\$ 78	\$ 70	\$ 70
\$280 (4 cr. @ \$70/cr.)	\$102	\$ 93	\$ 93
\$350 (5 cr. @ \$70/cr.)	\$124	\$117	\$117

Check the box labeled Partial Payment, fill in the first payment on the line labeled Tuition, fill in the service charge on the line labeled Partial Payment Service Charge on the registration form, and send payment, along with other special fees, to Independent Study. Texts and supplies ordered by mail through Independent Study (including the correct postage: see *Postage*) must be **paid in full** at the time of purchase.

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 4 if he or she has only made the first payment. A course grade will not be issued until all payments are received and processed.

Payment due notices will be sent to remind you of the remaining installments. Registration will be cancelled if total tuition has not been paid within 90 days of the original registration date.

Authorization Payment Plan

Students whose tuition is paid by: (1) an institution, company, or scholarship; (2) a federal or state agency, including military service; or (3) a foreign government or agency, may register by mail or in person. Complete the section on the registration form labeled Bill to Department/Company. Include your written authorization (in place of your check) with your registration form. The authorization must include the following:

1. A letter addressed to: Department of Independent Study, University of Minnesota, 45 Wesbrook Hall, 77 Pleasant Street SE, Minneapolis, MN 55455
2. Student's name
3. Correct amount of tuition and fees for a specific course
4. Term or date of eligibility
5. Authorizing signature or stamp required
6. Complete address of agency to be billed for tuition.

Financial Aid

See *Financial Aid*.

Video-Assisted Courses

A number of courses require students to view videocassettes (a list is given in the *Technology-Assisted Courses* section). Descriptions of these courses are given in the Course Descriptions section of this bulletin; they are marked with a videocassette icon:



Video programs are available on VHS cassettes for home use. To rent videocassettes from Independent Study, fill in the appropriate space (Videotapes) on the registration form and include a \$50 fee (\$25 rental plus \$25 deposit). The \$25 deposit will be refunded when you return the course videocassettes to Independent Study in good condition. You can use the videocassettes for six months, although you have one year from the time you registered to complete the course. If you do not return the course videocassettes, a hold will be placed on your University record. If you lose or damage a videocassette, you will be required to pay the cost of replacing it (usually \$50). Video-assisted courses are available only within the United States and Canada.

If you do not want to rent videocassettes from Independent Study, you can go to the following University of Minnesota locations to view the video programs. The Twin Cities center has the programs for all video-assisted courses; the other centers have some of the programs. Please call the center you want to visit to check on its open hours and videocassette availability. If the programs you need are not available at the specific center, call

General Information

612-624-4393 to ask about the programs; special arrangements can sometimes be made to send them to a center.

Twin Cities

Learning Resources Center
15 Walter Library
Minneapolis campus
612-624-1584

Morris

Regional Advising Service
232 Community Services Building
Morris campus
612-589-2211-ext. 6456

Duluth

Media Services Center
248 Library
Duluth campus
218-726-6121

Rochester

855 SE 30th Avenue
Highway 14 East
612-624-2263; 507-280-2828;
1-800-947-0117



Selecting a Course

You are responsible for enrolling in courses appropriate to your needs and educational level, and completing them. See the *General Information* section for information on *Course Completion, Cancellations, and Reinstatement*. Additional information about a course can be obtained by calling or writing the Department of Independent Study for a free introduction to the course study guide. The introduction will tell you more about course objectives, requirements, and materials. Use the form at the end of this bulletin. Study guides are also available for inspection at the Independent Study office.

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 about the applicability of credits at the University of Minnesota, contact:

CEE Counseling
University of Minnesota
314 Nolte Center
315 Pillsbury Drive SE
Minneapolis, MN 55455
612-625-2500

Reading Course Descriptions

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.

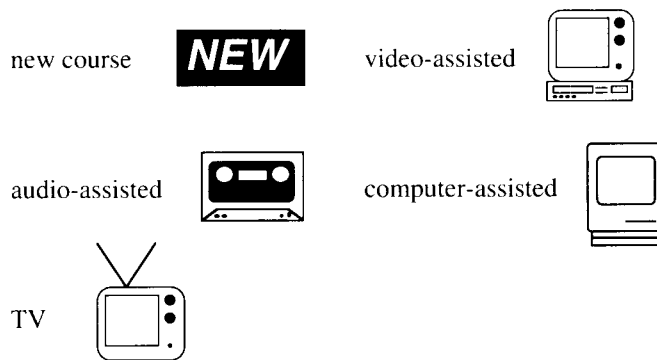
- Courses are listed under **departmental or subject headings**, alphabetically arranged. Where other classifications are possible, cross references are given. Also refer to the index.

How to Register

- The University uses the following college course numbering system.

0001 to 0998 Noncredit courses
 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 the necessary prerequisites
 5000 to 5998 Advanced courses for juniors, seniors, and graduate students (credits earned through Independent Study, except for specified broadcast television courses, are **not** accepted as graduate credit in the University of Minnesota Graduate School)

- Generally, 3xxx- and 5xxx-level courses are more difficult than 1xxx-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 CEE Counseling Office.
- New courses or those that are technology-assisted are marked with symbols:



- The description below indicates the information that is found in all college course descriptions in this bulletin.

1
2
3


Mus 5702 American Music: Twentieth-Century American Music (A731)

4
5
6
7

6 assignments—1 exam—\$294/\$684 (grad tuition, if applicable)—4 degree credits—
 text price \$36—study guide \$10—10 audiocassettes \$26.50—Riedel

8
9
10
11

12
13

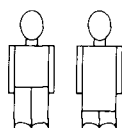
 Analysis of American music during this century: folk, popular and classical, black and Chicano, opera and symphony, contemporary music.

- Department designation and course number
- Course title
- Department of Independent Study (DIS) reference number
- Number of assignments (If a course lists a small number of assignments, they usually require more preparation.)
- Number of exams
- Tuition (undergraduate rate/graduate rate [if applicable])
- Number of credits

8. Price of texts
 9. Price of study guide (if applicable)
 10. Price of audiocassettes, lab kits, or other special materials
 11. Author's/instructor's last name (faculty are listed after each department or subject heading)
 12. Symbol indicating that audiocassettes are used with this course (see above)
 13. Course content and prerequisites, if any
- 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 (NUCEA). See the *General Information* section, *Professional Associations*, for more information.

Registering

- You can register for most Independent Study courses at any time.
- There are four ways to register.



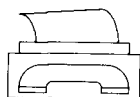
In person: 45 Wesbrook Hall, Minneapolis campus of the University



By mail: Department of Independent Study
University of Minnesota
45 Wesbrook Hall
77 Pleasant St. SE
Minneapolis, MN 55455



By phone: 612-626-8977, 8 a.m.—3:30 p.m., credit card only



By fax: 612-626-7900, credit card only

How to Register

- Complete the registration form at the end of this bulletin (a sample is shown below). Some of the information on the back of the registration form is required for federal reporting purposes; the rest will help us learn more about you and what types of courses you want and need.
- After you register, you will receive a fee statement/course confirmation form, comprehensive study guide, computerized submission forms, and mailing labels. Students who have not received a fee statement/course confirmation form three weeks after mailing in their registration and tuition should call 612-624-0000.

UNIVERSITY OF MINNESOTA
Continuing Education and Extension
Department of Independent Study

45 Weesbrook Hall
77 Pleasant Street SE
Minneapolis, MN 55455
(612) 624-0000
(800) 234-6564
Fax: (612) 626-7900

Registration Form

Please Print

Social Security Number	0 0 0 - 1 2 - 3 4 5 6	University ID #	0 1 0 2 0 3 0
Last Name	S t u d e n t	Middle Initial	E
First Name	A n n	Title (Mr Ms Mrs Miss Dr)	M s
Address	123 Fourth Ave., Apt. 101		
City	Anytowne	State	MN Zip Code 00000
County	Fifth	Country	USA
Home Phone #	(123) 555 - 1234	Work Phone #	(123) 555 - 5678
Fax # ()	-	Gender	Male <input type="checkbox"/> Female <input checked="" type="checkbox"/>
Birthdate	02 / 03 / 60		

Use the Independent Study bulletin to complete the following. High school courses can be taken A-F grading only.

(DIS NO.)	DEPT.	COURSE NO.	COURSE TITLE	CREDITS	A-F OR S-H	TUITION
A731	Mus	5702	Am. Music: 20th Century Am. Music	4	A-F	\$ 294
						\$
						\$

Have you enrolled in a University of Minnesota Independent Study course before? Yes No

Have you completed the prerequisites? Yes No

G.I. Bill registration? Yes No

Type of Payment	Amount Due	Bill to Department/Company: (Full Payment Only) (attach authorization)
<input checked="" type="checkbox"/> Full Payment	Tuition \$ 294.00	Name _____
	Textbooks \$ 36.00	Address _____
<input type="checkbox"/> Partial Payment (1/3 tuition + \$8 service charge per course)	Partial Payment Service Charge \$ _____	City _____
	Study Guide \$ 10.00	State _____ Zip Code _____
	Audiotapes* \$ 26.50	Credit Card Information (Full Payment Only)
	Videotapes \$ _____	<input checked="" type="checkbox"/> VISA Exp. Date 12/94
	Other, Supplies* \$ _____	<input type="checkbox"/> MasterCard Card # 123-456-789-000
	Postage \$ 8.00	Name on Card Ann E. Student
Taxable items at 6.5%; Mpls. residents pay 7%	Tax \$ 1.72	Signature <i>Ann E. Student</i>
	TOTAL \$ 376.22	

To register by fax: Full payment only. Provide VISA or MasterCard information. ▲

You are responsible for all policies in the Independent Study bulletin.

Student's Signature *Ann E. Student*

Date 7/13/93



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.

Nick Biondich, M.S., C.P.A., Faculty member and Continuing Education and Extension Coordinator, Accounting

Gordon Heslop, D.B.A., Accounting, Continuing Education and Extension

Dennis R. Lassila, Ph.D., C.P.A., Graduate Tax Faculty, Texas A & M University

Acct 1050 Introduction to Financial Reporting (1533)

14 assignments—2 exams—5 degree credits—\$350 (plus texts)—Biondich

Introduction to the basic concepts of measurement and valuation that underlie the development of financial reports for external users. Financial statement preparation, analysis of alternative valuation approaches, and interpretation of financial statement information are the focal points of this course. (Prerequisite: 40 credits completed). **This course is now in preparation; please inquire before enrolling.**

Acct 3001 Introduction to Management Accounting (1540)

12 assignments—2 exams—\$330—4 degree credits—text price \$65—Heslop/staff

A broad overview of management accounting as the main information collection and analysis technology of an organization. Topics include analysis of cost-volume-profit relationships, budgeting and analysis of variances from budgeted performance, and issues relating to decentralized organizational design. Must be taken A-F. (Prerequisite: Acct 1025 or Acct 1050)

Acct 5135 Income Tax Accounting (1584)

16 assignments—1 exam—\$330—4 degree credits—text price \$63—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 given to business deductions, personal deductions, gains and losses, nontaxable exchanges, deferred compensation, and taxation of business entities. Covers recent tax laws, including those enacted through the end of 1992. Must be taken A-F. (Prerequisite: Acct 1025 or Acct 1050 or equivalent and at least 90 credits completed or in progress)

Adolescent Psychology

See *Child Psychology*.

Afro-American and African Studies (CLA)

Charles Pike, Ph.D., Assistant Professor, *Afro-American and African Studies*

Afro 3601 Introduction to African Literature (A376)

11 assignments—2 exams—\$294—4 degree credits—text price \$65—study guide \$10—supplement \$10—11 audiocassettes \$29—Pike



A survey of 19th and 20th century African literature, including oral narratives, written poetry, short stories, novels, and plays. All readings in English.

New courses and those that require the use of a computer are marked with symbols:

NEW



Agriculture

See *Entomology, Food Science and Nutrition, Horticultural Science*.

American Studies (CLA)

Roger Clemence, M.L.A. and M. Arch., Professor and Associate Dean, *College of Architecture and Landscape Architecture*

J. Randolph Cox, M.A., Professor and Reference Librarian, *St. Olaf College*

Judith Martin, Ph.D., Associate Professor, *Geography and Urban Studies, Center for Urban and Regional Affairs*

Cynthia Richter, M.A., Teaching Assistant and Ph.D. candidate, *American Studies*

Nancy L. Roberts, Ph.D., Associate Professor of *Journalism and Mass Communication, and adjunct faculty member, Program in American Studies*

AmSt 1003 American Cultures (1423)

15 assignments—no exams—\$280 (plus texts)—4 degree credits—Richter

NEW

Interdisciplinary study of American cultures, recognizing their ethnic and racial diversity by using a variety of interdisci-

plinary methods and materials to help students understand large cultural, sociopolitical and public policy issues. 1920s to the present. **This course is now in preparation; please inquire before enrolling.**

AmSt 1920 Topics in American Studies: Ellery Queen and the American Detective Story (A141)

8 assignments—1 exam—\$280—4 degree credits—text price \$50—study guide \$10—10 audiocassettes \$26.50—Cox



Surveys American detective fiction, both classic and hard-boiled, to suggest reasons for its continued popularity. Novels and stories by the major writers (Poe, Hammett, Ellery Queen, Rex Stout, and others) will be assigned for reading and discussion. Audiocassettes focus on Ellery Queen as an example of the changing style of the genre.

AmSt 3920/5920 Topics in American Studies: The Meanings of Place (V143/V143.1)

6 assignments—no exams—\$294—4 degree credits—text price \$63—study guide \$20—video rental \$50 (\$25 refund)—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 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. Also available as Arch 5956. Students may receive credit for only one of these courses: AmSt 3920 or AmSt 520 or Arch 5956. **See the General Information section, Video-Assisted Courses.**

AmSt 3970 Directed Study: American Architecture to 1860 (1408)

11 assignments—no exams—\$294—4 degree credits—text price \$69—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. Students may receive credit for only one of these courses: AmSt 3970 or Arch 3970.

Animal and Plant Systems (Agriculture)

Steve Simmons, Ph.D., Professor, Agronomy and Plant Genetics

AnPI 3010 Environment and World Food Production (1070)

\$330 (plus texts)—4 degree credits—Simmons
Orientation to world agriculture systems and their interactions with the environment. **This course is now in preparation; please inquire before enrolling.**

Anthropology (CLA)

Fay Cohen, Ph.D., Professor and Academic Program Coordinator, School for Resource and Environmental Studies, Dalhousie University

Luther P. Gerlach, Ph.D., Professor of Anthropology

John Ingham, Ph.D., Associate Professor of Anthropology

Janet Spector, Ph.D., Associate Professor of Anthropology

Anth 1101 Human Origins (1103)

4 assignments—no exams—\$350—5 degree credits—text price \$47—supplement \$10—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)

15 assignments—1 exam—\$350—5 degree credits—text price \$66—Cohen

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)

2 assignments—1 exam—\$350—5 degree credits—text price \$55—study guide \$20—video rental \$50 (\$25 refund)—Gerlach



An introduction to the ways in which the cross-cultural, comparative, and holistic study of contemporary societies and cultures across the world can provide an understanding of human diversity, adaptation, and condition. Social, political, economic, technological, and religious institutions are studied. **See the General Information section, Video-Assisted Courses.**

Anth 5141 Culture and Personality (1197)

1 assignment—2 exams—\$294—4 degree credits—text price \$47—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 (Architecture and Landscape Architecture)

Roger Clemence, MLA and M. Arch., Professor and Associate Dean, College of Architecture and Landscape Architecture

Judith Martin, Ph.D., Associate Professor, Geography and Urban Studies, Center for Urban and Regional Affairs

Nancy L. Roberts, Ph.D., Associate Professor of Journalism and Mass Communication, and adjunct faculty member, Program in American Studies

For more information about a course, call (612-624-0000; 1-800-234-6564) or write for a free copy of the study guide introduction.

Arch 3970 Directed Study: American Architecture to 1860 (1408.1)

11 assignments—no exams—\$330—4 degree credits—text price \$69—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). This course can be used for architecture degrees only as an elective. Also available as AmSt 3970. Students may receive credit for only one of these courses: Arch 3970 or AmSt 3970.

To be admitted to a certificate or degree program, see pages 107–120.

Arch 5956 The Meanings and Messages of Place: City, Town, and Countryside (V143.2)

8 assignments—no exams—\$330—4 degree credits—text price \$63—study guide \$20—video rental \$50 (\$25 refund)—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 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. Also available as AmSt 3920/5920. Students may receive credit for only one of these courses: Arch 5956 or AmSt 3920 or AmSt 5920. **See the General Information section, Video-Assisted Courses.**

Area Studies Programs (CLA)

East Asian Studies

Peter Ditmanson, Ph.D. candidate, East Asian Studies

EAS 1032 Religions of East Asia (5521)

13 assignments—1 exam—\$280 (plus texts)—4 degree credits—Ditmanson

Religious aspects of Confucianism, Taoism,

Buddhism, and Shintoism as practiced in East Asia. Also available as ReIS 1032. Students may receive credit for only one of these courses: EAS 1032 or ReIS 1032. **This course is now in preparation; please inquire before enrolling.**

Art (CLA)

Sheila McNally, Ph.D., Professor of Art History

ArtH 1001 Introduction to the Visual Arts (V121)

2 assignments—2 exams—\$280—4 degree credits—text price \$47—study guide \$10—video rental \$50 (\$25 refund)—McNally



Basic problems of art. Examples of painting and sculpture analyzed to illustrate the roles of art in society.

Problems of design, materials, and techniques, presented topically rather than chronologically. **See the General Information section, Video-Assisted Courses.**

ArtH 1001 Introduction to the Visual Arts (T121)

Television course—2 assignments—2 exams—\$280—4 degree credits—text price \$47—study guide \$10—McNally



See above. **Broadcast: fall 1993 on KTCI (Channel 17) and KWCM (Channel 10); see the Technology-Assisted Courses section.**

Astronomy (GC)

Ivan M. Policoff, M.A., M.S., Associate Professor, General College

GC 1161 Physical Science: Solar System Astronomy (1314)

15 assignments—3 exams—\$350—5 degree credits—text price \$38—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 the planets and their satellites in the solar system, and instruments used by the astronomer. Observations of the night sky included. Knowledge of elementary algebra suggested.

GC 1162 Physical Science: Stellar Astronomy (1315)

16 lessons—3 exams—\$350—5 degree credits—text price \$52—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 cosmogony. Observation of the night sky included. Knowledge of elementary algebra helpful.

Beekeeping

See *Entomology*.

Biology (Biological Sciences)

Robert Brooker, Ph.D., Associate Professor, Biological Process Technology Institute

William Cunningham, Ph.D., Professor, Genetics and Cell Biology

Paul Roebuck, M. A., Teaching Assistant and Ph.D. candidate, Geography

Dann Siems, M.A., Teaching Assistant and Ph.D. candidate, Ecology, Evolution, and Behavior

Val Woodward, Ph.D., Professor, Genetics and Cell Biology

Biol 1009 General Biology (1601)

15 assignments—2 exams—\$350—5 degree credits—text price \$64—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.

Biol 1101 Heredity and Human Society (A815)

5 assignments—2 exams—\$280—4 degree credits—text price \$34—study guide \$10—17 audiocassettes \$44.50—Woodward/Siems

NEW

Principles of heredity and their social and cultural implications.

**Biol 3051 Biology and the Future of the Earth (1604)**

12 lessons—2 exams—\$330—4 degree credits—text price \$55—Cunningham/Roebuck

Nontechnical discussion of current environmental issues, including air and water pollution, human population growth, toxic and hazardous wastes, urbanization, resource economics, biological diversity, energy, health, and environmental ethics.

NEW

water pollution, human population growth, toxic and hazardous wastes, urbanization, resource economics, biological diversity, energy, health, and environmental ethics.

William Cunningham is a professor in the Department of Genetics and Cell Biology at the University of Minnesota, where he has taught since 1967. He received a Continuing Education and Extension Distinguished Teaching Award in 1991, and a Morse-Alumni Award for outstanding contributions to undergraduate education in 1993. Cunningham is a past chair of the Minnesota chapter of the Sierra Club and vice president of the Friends of the Boundary Waters Wilderness, and was chair of the Governor's Energy Policy Task Force in the mid-1970s.



Biol 5004 Cell Biology (1603)

11 assignments—2 exams—\$247.50—3 degree credits—text price \$62—Brooker

Structures and functions of membranes, organelles, and other macromolecular aggregates found in plant, animal, and bacterial cells. Cell form and movement, intercellular communication, transport, and secretion. (Prerequisite: Biol 1009; Biol 5001 recommended)

GCB 3022 Genetics (1605)

12 assignments—2 exams—\$330—4 degree credits—text price \$59—Brooker

NEW Mechanisms of heredity, their implications for biological populations, and applications to practical problems. Not intended for biology majors. (Prerequisite: Biol 1009)

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*
- Statistics*
- Textiles and Clothing*

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.

Robert Holloway, Ph.D., Professor Emeritus, Strategic Management and Organization, Carlson School of Management
Mark Weber, Ph.D., J.D., Assistant Professor of Management, University of Wisconsin, LaCrosse

BGS 3002 Business and Society: Ethics and Stakeholder Management (1594)

12 assignments—2 exams—\$330—4 degree credits—text price \$53—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 are examined in the context of the public policy process. Current social issues and their impact on business. Must be taken A-F.

BGS 3004 International Business (1591)

1 assignment—2 exams—\$330—4 degree credits—text price \$55—Holloway

World business, with emphasis on international concepts, comparative cultures and environments, global business strategies, multinational corporations, and management operations in the global scene. The international constraints in the multinational corporation are examined. Must be taken A-F. (Prerequisite: at least 90 credits completed or in progress)

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.

Dennis R. Hower, J.D., Professor, General College

BLaw 3058 Introduction to Law, and the Law of Contracts and Sales Contracts (1859)

13 assignments—2 exams—\$330—4 degree credits—text price \$75—Hower

Study of the origin of law, its place in and its affect on society; the history and development of law; the systems of courts; and legal procedure. An extensive study of the law of contracts

"Independent Study let me work at my own pace. It was a way to get credit during the summer without having to go to summer school in Duluth or the Twin Cities." (student in Comp 3014)

as the basic law affecting business transactions; and law affecting the sale of goods contracts. Must be taken A-F. See also GC 1534. Students may receive credit for only one of these courses: BLaw 3058 or GC 1534. (Prerequisites: Econ 1101 or equivalent and at least 90 credits completed or in progress)

BLaw 3078 Agency, Partnerships, Corporations, and Commercial Paper (1860)

11 assignments—2 exams—\$330—4 degree credits—text price \$75—Hower

A study of law affecting the relationship between principal and agent 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 assignments—2 exams—\$330—4 degree credits—text price \$75—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 the event of death. (Prerequisite: BLaw 3058 and at least 90 credits completed or in progress)

Business Studies (GC)

Dennis R. Hower, J.D., Professor, General College

Patrick Kroll, Associate Professor, General College

Roger A. Larson, Ph.D., Professor Emeritus, General College

Shari L. Peterson, Ph.D., Assistant Professor, General College

GC 1235 United States: Law in Society (1615)

14 assignments—2 exams—\$280—4 degree credits—text price \$53—supplement \$8—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), and wills and probate procedures. A civil law suit, from beginning to end, is explained. Each student is required to complete a project paper.

GC 1511 Introduction to Modern Business (1625)

15 assignments—1 exam—\$350—5 degree credits—text price \$53—Hower

Intended for both business and general education, this course provides an overview of the economic environment in which business operates. Major functions of a business organization are surveyed, including production, finance, personnel, and marketing. A useful introductory course for students planning to do more work in business, but also recommended for those who want only to survey the field.

GC 1513 Principles of Small Business Operations (1628)

13 assignments—2 exams—\$280—4 degree credits—text price \$75—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 is on analysis of the economic environment, strategic planning, internal analysis of a 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.

You can order all course supplies by mail. See pages 21-22.

GC 1534 Practical Law (1620)

15 assignments—1 exam—\$280—4 degree credits—text price \$88—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. Students may receive credit for only one of these courses: GC 1534 and BLaw 3058.

GC 1540 Accounting Fundamentals I (1527)

13 assignments—2 exams—\$280—4 degree credits—text price \$84—Kroll

The first of a two-part introductory course in college accounting, 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 assignments—2 exams—\$280—4 degree credits—text price \$102—Larson

Continuation of GC 1540. 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 assignments—2 exams—\$350—5 degree credits—text price \$48—optional video cassette rental \$35 (\$25 refund)—Peterson

NEW Emphasis on application of the fundamentals of marketing through case study and decision making. Topics include target markets, segmentation analysis, marketing mix, and strategic marketing. Students must indicate whether they want to take the course with or without the optional videocassette. See the *General Information* section, *Video-Assisted Courses*.



GC 1553 Marketing: Principles of Management (1623)

13 assignments—3 exams—\$350—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. Includes several exercises designed to provide students with insight into personal leadership style and characteristics.

Business Writing

See *Composition*.

Chemistry (GC)

Richard E. Uthe, Ph.D., Associate Professor, General College

GC 1166 Physical Science: Principles of Chemistry (7725)

14 assignments—5 exams—\$350—5 degree credits—text price \$35—Uthe

Fundamental principles and laws of chemistry; 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 and reactions, stoichiometry, solutions and solution concentrations, acids and bases, gases and gas laws, organic chemistry. Students become acquainted with everyday applications of chemistry and the contributions chemistry makes to modern society. They also gain a general understanding of both the content and process of the science of chemistry. This course is a good foundation for further study of chemistry and related sciences. (Prerequisite: basic background in elementary algebra)

Business course professor Patrick Kroll is a winner of the CEE Distinguished Teaching Award.

Child Psychology (Education and GC)

Also see *Psychology*.

Daniel Ashmead, Ph.D., Professor, Vanderbilt University

W. Andrew Collins, Ph.D., Professor, Child Psychology

Kim Gale Dolgin, Ph.D., Professor, Ohio Wesleyan University

Ann E. Ellis, Ph.D., Lecturer, Institute of Child Development

Michael Harris, M.A., Research Assistant and Ph.D. candidate, Institute of Child Development

Sander M. Latts, Ph.D., Associate Professor, General College

Alexander A. Muller, Ph.D., in Psychology

Catherine Sullivan, M.A., Teaching Assistant, Institute for Child Development

Amy Susman, M.A., Administrative Fellow and Ph.D. Candidate, Institute of Child Development

CPsy 1301 Introductory Child Psychology (8283)

13 assignments—2 exams—\$280—4 degree credits—text price \$57—Ashmead/Harris

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)

13 assignments—2 exams—\$330—4 degree credits—text price \$62—Ashmead/Ellis

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 assignments—1 exam—\$330—4 degree credits—text price \$52—Muller/Sullivan

Explores practical and theoretical issues in the psychology of maturity and aging. Reviews developmental changes in perceptual-motor, cognitive, and social behavior from young adulthood to old age. (Prerequisite: CPsy 1301)

CPsy 5303 Adolescent Psychology (8282)

14 assignments—1 exam—\$330—4 degree credits—text price \$51—Dolgin/Harris

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)

16 assignments—1 exam—\$330—4 degree credits—text price \$72—Collins/Susman

Processes of individual change from infancy through adolescence. 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 (8288)

13 assignments—2 exams—\$280—4 degree credits—text price \$60—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 socioeconomic class on the development of behavior problems in children.

Chinese

See *Institute of Languages and Literatures*.

You can register
by phone using
Visa or
MasterCard.

Classical and Near Eastern Studies (CLA)

Classics

Jennifer Carozza, Teaching Assistant and Ph.D. candidate, Classical Studies

Gerald Erickson, Ph.D., Professor of Classical Studies

R.A. Swanson, Ph.D., Classical Studies

Clas 1019 Magic, Witchcraft, and the Occult in Greece and Rome (A524)

3 assignments—1 exam—\$280—4 degree credits—text price \$21—study guide \$10—10 audiocassettes \$26.50—Erickson



Magic and witchcraft in classical literature and mythology. The practice of magic as observed from papyri, epigraphical and literary evidence. Beliefs and practices concerning prophecy and the interpretation of dreams. 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 assignments—1 exam—\$140—2 degree credits—no required text—Swanson/Carozza

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 (A523)

11 assignments—no exams—\$294—4 degree credits—text price \$77—study guide \$10—10 audiocassettes \$26.50—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.

Clas 5004 Eroticism and Family Life in the Graeco-Roman World (A526)

10 assignments—no exams—\$294—4 degree credits—text price \$57—study guide \$10—supplement \$26—10 audiocassettes \$26.50—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, and 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.

Clas 5005 Madness and Deviant Behavior in Ancient Greece and Rome (A522)

15 assignments—no exams—\$294—4 degree credits—text price \$20—study guide \$10—supplement \$10—15 audiocassettes \$39.50—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.

Greek

Jennifer Carozza, Teaching Assistant and Ph.D. candidate, Classical and Near Eastern Studies

Grk 1101 Beginning Classical Greek I (5901)

15 assignments—1 exam—\$350—5 degree credits—text price \$23—Carozza

An introduction to the Homeric and classical Greek language: alphabet, vocabulary, and idioms. Selected readings from the *Iliad* and *Odyssey* of Homer and classical Greek selections of moderate difficulty. Written translation exercises and an introduction to scansion and meter.

Courses that use audiocassettes are marked with a symbol:



Latin

Jennifer Carozza, Teaching Assistant and Ph.D. candidate, Classical and Near Eastern Studies
George Rochefort, Ph.D., Classics

Note: Students are discouraged from enrolling concurrently in two language courses at the 1xxx level.

Lat 1101 Beginning Latin I (6201)

15 assignments—2 exams—\$350—5 degree credits—text price \$24—Carozza

NEW Basic grammar and vocabulary, practice in reading and writing Latin, workbook exercises, easy Latin readings, and Roman legends in *38 Latin Stories*.

Lat 1102 Beginning Latin II (6207)

15 assignments—2 exams—\$350—5 degree credits—text price \$24—Carozza

NEW Continuation of Lat 1101. Similar in content and method, leading to connected reading in *38 Latin Stories*. (Prerequisite: Lat 1101 or equivalent)

Lat 1103 Selections From Latin Literature (6208)

11 assignments—2 exams—\$350—5 degree credits—text price \$24—Carozza

NEW A review of the elements of Lat 1101 and Lat 1102, with a shift of emphasis to longer passages of continuous reading in *38 Latin Stories*. 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 assignments—2 exams—\$350—5 degree credits—text price \$19—Carozza

Selections from Cicero, Livy, and Ovid are read. In addition to the review of Latin grammar, which is incorporated in the readings, selections familiarize students 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—\$367.50—5 degree credits—text price \$14—Rochefort/Carozza

Readings from the most famous humanistic essays. (Prerequisite: Lat 1103 or equivalent)

Lat 3106 Latin Poetry: Vergil's Aeneid (6211)

17 assignments—2 exams—\$367.50—5 degree credits—text price \$38—Rochefort/Carozza

Readings of selections from Books I-II; background reading in Roman life and thought is included in the text. (Prerequisite: Lat 1103 or equivalent)

Comparative Literature

See *Cultural Studies and Comparative Literature*.

Composition and Communication (CLA and GC)

Also see *English, Creative and Professional Writing*.

Harold J. Alford, Ph.D., English

Richard Carr, M.A., Teaching Assistant and Ph.D. candidate, English

Barry Edwards, Teaching Assistant and Ph.D. candidate, English

Martha Edwards, Teaching Assistant and Ph.D. candidate, History

Sonia Feder-Lewis, Teaching Assistant and Ph.D. candidate, English

Justin J. O'Connell, B.A., English, Continuing Education and Extension

Mark Reschke, Teaching Assistant and Ph.D. candidate, English

Donald Ross, Jr., Ph.D., Professor, English

Lida Strot, Teaching Assistant and Ph.D. candidate, Curriculum and Instruction

Jianping Wang, Teaching Assistant and Ph.D. candidate, Composition and Communication

Colette Wanless-Sobel, Ph.D., Lecturer in

Composition and Communication

You can charge your tuition (full payment only) and supplies using Visa or MasterCard.

Donald Ross is a professor of English and Composition in the Department of English. He received his A.B. and M.A. degrees from Lehigh University and his Ph.D. from the University of Michigan. He has taught courses in Continuing Education and Extension for more than 20 years, and in 1992 received a CEE Distinguished Teaching Award. In recent years, he developed software packages for computer-assisted Composition courses.



GC 0402 Grammar and Usage Review (3505)

11 assignments—1 exam—\$210—no credit—text price \$22—Alford/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 assignments indicate the student should do extra work. No theme or letter writing required.

Comp 0011 Preparation for Writing Practice (3517)

12 assignments—no exams—\$210—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 assignments—no exams—\$350—5 degree credits—text price \$30—M. Edwards

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.

Comp 1031 Introduction to Technical and Business Communication (V351)

8 assignments—no exams—\$140—2 degree credits—text price \$32—study guide \$10—video rental \$50 (\$25 refund)—Ross



Introduction to the processes used to define a topic, draft, and rewrite reports for business, government, and technical fields. **See the *General Information* section, *Video-Assisted Courses*.**

Comp 3011 Writing About Literature (3535)

9 assignments—1 exam—\$294—4 degree credits—text price \$65—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 assignments—no exams—\$294—4 degree credits—text price \$59—Carr

Emphasis is on writing about the kind of texts ordinarily encountered in philosophy, history, cultural anthropology, social work, and interdisciplinary fields. Initial work concerns ways to abstract and represent complicated discussions, including those of "primary" texts and "secondary" scholarship and commentary. Topics:

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 or equivalent)

Comp 3013 Writing for the Arts (3537)

11 assignments—no exams—\$294—4 degree credits—text price \$36—Strot

Descriptions of painting, film, music, architecture, and other types of art (other than literature) as the basis for analysis. Initial emphasis is on developing concise and unambiguous descriptions of art objects or performances. The chief emphasis is on how descriptions serve as the basis for more complicated writing assignments, such as formal analyses and reviews. (Prerequisite: Writing Practice requirement or equivalent)

Comp 3014 Writing in the Social Sciences (3538)

10 assignments—no exams—\$294—4 degree credits—text price \$23—Wanless-Sobel

Strategies for expressing quantitative or statistical information in clear prose. How statistical tables and summaries interact with the written text. How to develop narrative and descriptive techniques for producing case studies and histories. The course emphasizes 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 3014 Writing in the Social Sciences (3546)

10 assignments—no exams—\$294—4 degree credits—text price \$23—Wanless-Sobel

NEW See above. Students must have access to an Apple Macintosh with Hypercard or be able to use a microcomputer in the University's computer labs. See the *Technology-Assisted Courses* section.



Comp 3015 Writing About Science (3539)

12 assignments—no exams—\$294—4 degree credits—text price \$21—supplement \$5—Reschke

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 (general) and writing for science (special). The various tasks of science writing and the forms science writing can assume are discussed and practiced. This course also considers the writing process and what makes for rhetorical effectiveness: organization, support, clarity, cleanliness, and appropriateness for the audience. As much as possible, the course responds to individual student needs, interests, and abilities. (Prerequisites: the Writing Practice requirement or equivalent)

Comp 3022 Critical Reading and Writing for Management (3545)

11 assignments—no exams—\$294—4 degree credits—text price \$32—B. Edwards

NEW This course develops general strategies for engaging texts critically, both as a reader and as a writer. The three major assignments—abstract, critique, and synthesis—gradually teach the skills needed for precise understanding of texts, critical analyses of texts, and sophisticated use of them.

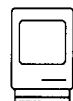
Comp 3031 Technical Writing for Engineers (3541)

12 assignments—no exams—\$294—4 degree credits—text price \$51—Wang

Emphasizing the writing process, this course helps the student learn about technical writing for different audiences and ways to achieve it. It also introduces the student to various kinds of format for technical writing, such as instruction manual, memo, or formal report. (Prerequisite: Comp 1011 or equivalent)

Comp 3031 Technical Writing for Engineers (3544)

8 assignments—no exams—\$294—4 degree credits—no required text—Ross



See above. Students must have access to an Apple Macintosh with Hypercard or be able to use the microcomputers in one of the University's computer labs. See the *Technology-Assisted Courses* section.

Some TV courses are available for graduate credit. See page 23 for graduate tuition rates.

Comp 3032 Preprofessional Writing for Business (3542)

12 assignments—no exams—\$294—4 degree credits—text price \$72—Feder-Lewis

Focus on content, form, and style of business writing in reports, case studies, job-search materials, and correspondence. Practical examples. (Prerequisites: the Writing Practice requirement or equivalent)

Computers (IT and GC)

Douglas Robertson, Ph.D., Professor, General College

James Slagle, Ph.D., Professor, Computer Science

Gang Wang, Teaching Assistant and Ph.D. candidate, Computer Science

CSci 3001 Perspectives on Computers and Society (1902)

11 assignments—1 exam—\$330—4 degree credits—text price \$66—Slagle/Wang

The impact of computers on society—partnership or confrontation? History of development, potential for use, computer utility, benefits and potential problems, chip technology and computer-aided design, 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 audiocassette.

GC 1571 Introduction to Microcomputer Applications (1978)

9 assignments—1 exam—\$350—5 degree credits—text price \$30—Robertson



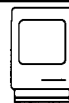
Introduction to IBM microcomputer applications, including microcomputer components, operating system (DOS), word processing, spreadsheet, and database management software. This hands-on laboratory course emphasizes solving problems using popular microcomputer applications software. Several disks are included with the course materials; students must indicate whether they want 5.25 or 3.5 inch disks. All assignments are done on computers. Software (i.e., the word

processor, spreadsheet, and database management programs) is provided with the course materials, but students must have access to an IBM PC or compatible microcomputer or be able to use a microcomputer in the University's computer labs. (Prerequisite: elementary algebra) **See the *Technology-Assisted Courses* section.**

GC 1572 Introduction to Computer Programming (1979)

9 assignments—3 exams—\$350—5 degree credits—text price \$37—Robertson

NEW



Experience in using the microcomputer as a problem-solving tool. Students design, write, code, and run computer programs written in the BASIC computer language. Emphasizes writing properly structured and documented programs to solve problems from the social and natural sciences. Topics: problem-solving techniques as applied to computing, elements of BASIC, external data file manipulation, writing structured programs, and integration of programming with data created by other applications. Gives background for further programming courses. Students must have access to an IBM or IBM-compatible computer with a BASIC interpreter or be able to use a microcomputer in the University's computer labs. Two disks are included with the course materials; students must indicate whether they want 5.25 or 3.5 inch disks. (Prerequisites: GC 1571 or microcomputer experience and elementary algebra) **See the *Technology-Assisted Courses* section.**

Cultural Studies and Comparative Literature (CLA)

Jon Bassowitz, M.A., Teaching Assistant and Ph.D. candidate, Cultural Studies and Comparative Literature

Claudia Crawford, Ph.D., Assistant Professor, Cultural Studies and Comparative Literature
Anatoly Liberman, Ph.D., Professor of German

Our office is
open 8 a.m. to 8
p.m. on Tuesdays
and Thursdays.

CSCL 1301 Discourse and Society (5213)

10 assignments—no exams—\$280—4 degree credits—text price \$54—supplement \$10—Bassewitz

This course is the foundation course of the Cultural Studies program. It is designed to prepare students to speak, write, and think critically about different forms of cultural production. Through the study of art, literature, mass media, social history, and cultural theory, the course examines the discursive practices through which meanings, values, beliefs, and identities are constructed. Lessons focus on cultural artifacts drawn from Western “high art,” folk culture, and mass culture, which have been selected to prompt students to reflect on how discourses organize their behaviors, their desires, and their conceptions of themselves and others. Ultimately, the course aims to help students to develop the intellectual confidence to assert themselves as cultural producers as well as cultural consumers. **This course is now in preparation; please inquire before enrolling.**

CSCL 1302 Text and Context (5214)

9 assignments—2 exams—\$280—4 degree credits—text price \$71—supplement \$10—video rental \$50 (\$25 refund)—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. **See the General Information section, Video-Assisted Courses.**

CLit 5414 European Folk Tales (A362)

1 assignment—2 exams—\$294—4 degree credits—text price \$55—study guide \$10—10 audiocassettes \$26.50—Lieberman



This course is devoted to the folk tales of Germany, Scandinavia, France,

Russia, and England. It discusses the structure, message for adults and children, and origins of folk tales as a genre, and compares the tales of different nations and states. Folk tales are analyzed within the broader context of oral literature and folklore.

Curriculum and Instruction

See *Education, Curriculum and Instruction*.

Danish

See *Scandinavian Languages and Literature*.

Design, Housing, and Apparel (Human Ecology)

Timothy Blade, Ph.D., Associate Professor, Design, Housing, and Apparel

Dsgn 3572 Special Topics: Principles of Antique Collecting (A711)

5 assignments—no exams—\$330—4 degree credits—text price \$27—study guide \$10—10 audiocassettes \$26.50—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.

**East Asian Studies**

See *Area Studies Programs*.

“The course was relevant to my career and has improved my job performance, but the best thing is that it was independent study—I could progress at my own rate, not travel anywhere—just read, think, and write in my home.”
(student in Elem 5321)

Ecology, Evolution, and Behavior (Biological Sciences)

Also see *Forest Resources*.

William Lamberts, B.S., Graduate Teaching Assistant, Ecology, Evolution, and Behavior
Catherine Zabinski, Ph.D., Ecology, Evolution, and Behavior

EEB 3001 Introduction to Ecology (2011)

10 assignments—2 exams—\$330—4 degree credits—text price \$52—Zabinski/Lamberts

Ecology is the science that investigates the interactions of living things with each other and their environments. Students learn how ecologists explore these interactions as they take place between individuals and within ecosystems, communities, and populations of organisms. Attention is given to the importance of evolution in shaping ecological relationships, as well as to the impact of humans on natural systems.

Economics (CLA)

Shamlall Gupta, M.S., M.A., Lecturer, Continuing Education and Extension
Harlan Smith, Ph.D., Professor Emeritus of Economics

Econ 1101 Principles of Microeconomics (2103)

14 assignments—2 exams—\$280—4 degree credits—text price \$54—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 may receive credit for only one of these courses: Econ 1101 or Econ 1002.

Econ 1102 Principles of Macroeconomics (2104)

14 assignments—2 exams—\$280—4 degree credits—text price \$54—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 may receive credit for only one of these courses: Econ 1102 or Econ 1001.

Econ 3102 Macroeconomic Theory (2164)

16 assignments—2 exams—\$294—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 assignments—2 exams—\$294—4 degree credits—text price \$62—Smith

NEW 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)

Curriculum and Instruction

Helen L. Jorstad, Ph.D., Associate Professor, Curriculum and Instruction
Gregory Sales, Ph.D., Associate Professor, Curriculum and Instruction
Walter Wenda, M.S., Teaching Assistant and Ph.D. candidate, Curriculum and Instruction

For financial aid information, see pages 11–13 and call CEE Counseling, 612-625-2500.

CISy 5201 Systems Approach to Design of Instruction (2685)

5 assignments—3 exams—\$247.50 (plus texts)—3 degree credits—video rental \$50 (\$25 refund)—Sales



Instructional materials design in accordance with systems principles, including design of a specific unit of courseware. (Prerequisite: CISy 5000 or SeEd 5000 or consent of instructor) **This course is now in preparation; please inquire before enrolling.**

Elem 5321 Second Language Programs for Young Children: Like Child's Play (V266)

7 assignments—no exams—\$330—4 degree credits—text price \$35—study guide \$10—supplement \$10—video rental \$50 (\$25 refund)—Jorstad/Wenda



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 programs show visits to actual classrooms in action, bilingual and immigrant families, and interviews with a variety of outstanding specialists in the field. **See the General Information section, Video-Assisted Courses.**

Elem 5321 Second Language Programs for Young Children: Like Child's Play (T266)

Television Course—7 assignments—no exams—\$330/\$684 (Grad. School, U of M)/\$396 (grad rate, other schools)—4 degree credits—text price \$35—study guide \$10—supplement \$10—Jorstad



See above. If registering for graduate credit, enclose the correct tuition (see p. 23). **Broadcast: fall 1993 on KTCI (Channel 17), KWCM (Channel 10), KSMQ (Channel 15), and WDSE (Channel 8); see the Technology-Assisted Courses section.**

Education

Helen Carlson, Professor, Instructional Science, University of Minnesota Duluth

Educ 5660 Creating Social Studies Curriculum (2696) (U of M Duluth)

10 assignments—1 exam—\$247.50 (plus texts)—3 degree credits—Carlson

Creating social studies curriculum. Using historic sites and related materials to create new curricula. Implementing and evaluating living history learning experiences in the classroom. Credits for this Duluth course will appear on your U of M Twin Cities transcript. **This course is now in preparation; please inquire before enrolling.**

Educational Policy and Administration

Arthur M. Harkins, Ph.D., Associate Professor, Educational Policy and Administration
John Hoyt, Professor Emeritus of Agricultural and Applied Economics

EdPA 5099 Directed Study: Inventing the Future—Living, Learning, and Working in the 1990s (V265)

3 assignments—no exams—\$330—4 degree credits—text price \$15—study guide \$10—supplement \$10—video rental \$50 (\$25 refund)—Harkins



This field-based course is for 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 trends in work, leisure, education, technology, health, spirituality, homelife, and more. **See the General Information section, Video-Assisted Courses.**

Income Tax Accounting (Acct 5135) is updated every year to incorporate new tax provisions.

EdPA 5099 Directed Study: Inventing the Future—Living, Learning, and Working in the 1990s (T265)

Television Course—3 assignments—no exams—\$330/\$684 (Grad. School, U of M)/\$396 (grad rate, other schools)—4 degree credits—text price \$15—study guide \$10—supplement \$10—Harkins



See above. If registering for graduate credit, enclose the correct tuition (see p. 23). **Broadcast: fall 1993 on KTCI (Channel 17), KWCM (Channel 10), KSMQ (Channel 15), and WDSE (Channel 8); see the *Technology-Assisted Courses* section.**

EdPA 5110 Personal Time Management and Effective Administration (2681)

10 assignments—no exams—\$165—2 degree credits—text and tapes \$90—Hoyt



This course is ideal 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 you really want to do, but don’t have time for.

Elementary Education

See *Education, Curriculum and Instruction*.

Educational Psychology

L. Sunny Hansen, Ph.D., Professor, Educational Psychology

Karen Rogers, Ph.D., Assistant Professor, University of St. Thomas

S. Jay Samuels, Ph.D., Professor, Educational Psychology

EPsy 5112 Knowing, Learning, and Thinking (2694)

15 assignments—no exams—\$330—4 degree credits—text price \$40—Samuels



Principles of human information processing, issues in memory and thought, discussion of mental operations in comprehension and understanding, and analysis of intellectual structures supporting problem solving in applied settings.

EPsy 5114 Psychology of Student Learning (2695)

\$247.50 (plus texts)—3 degree credits—Samuels



This course addresses topics such as learning, understanding, and memory by examining how the human mind takes in information, processes the information, stores it, and uses it. How knowledge of human information processing can be used to improve learning and teaching is an important part of this course. **This course is now in preparation; please inquire before enrolling.**

EPsy 5400 Workshop: Counseling Psychology: Career Development and Planning (V263)

1 assignment—1 exam—\$330—4 degree credits—text price \$21—study guide \$10—supplement \$10—video rental \$50 (\$25 refund)—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. **See the *General Information* section, *Video-Assisted Courses*.**

EPsy 5690 Education of the Gifted and Talented (V264)

4 assignments—no exams—\$247.50—3 degree credits—text price \$52—study guide \$10—video rental \$50 (\$25 refund)—Rogers



Origin and development of terms such as *giftedness*, *creativity*, *genius*, *talent*, and *intelligence*; implications for educational practice; current issues and trends. **See the *General Information* section, *Video-Assisted Courses*.**

**General College
Professor
Douglas
Robertson is a
winner of the CEE
Distinguished
Teaching Award.**

EPsy 5690 Education of the Gifted and Talented (T264)

Television Course—4 assignments—no exams—\$247.50/\$513 (Grad. School, U of M)/\$297 (grad rate, other schools)—3 degree credits—text price \$52—study guide \$10—Rogers



See above. Graduate School approval was pending when this bulletin was printed. Call 612-624-4393 for current information. If registering for graduate credit, enclose the correct tuition (see p. 23). **Broadcast: spring 1994 on KTCI (Channel 17), KWCM (Channel 10), WDSE (Channel 8), and KSMQ (Channel 15); see the Technology-Assisted Courses section.**

Engineering

Also see *Mechanical Engineering*.

Michael McDonald, Ph.D., Associate Professor, Chemical Engineering, University of Minnesota Duluth

John S. Patten, Ph.D. in Chemical Engineering

Engr 3016 Deformable Body Mechanics (3238.1) (U of M Duluth)

8 assignments—3 exams—\$304—4 degree credits—text price \$67—Patten/McDonald

Introductory treatment of stress and strain at a point. Stress-strain relationships in two dimensions. Linear theory of torsion. Bending stresses. Deflection of determinate and indeterminate beams. Instability. Credits for this Duluth course will appear on your U of M Twin Cities transcript. (Prerequisites: Engr 3015, statics, and concurrent registration in Math 3380, Differential Equations I)

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.

Literature

Lillian Bridwell-Bowles, Ed.D., Associate Professor, English

Chester G. Anderson, Ph.D., Professor of English

Elin Anderson, M.A., Teaching Associate, English/Program in Composition and Communication

Philip Furia, Ph.D., Professor of English

Jill Gidmark, Ph.D., Professor, General College

Edward Griffen, Ph.D., Professor, English

Maureen Heacock, Teaching Assistant and Ph.D. candidate, English

Patricia Hodgell, Ph.D., English, Lecturer, Continuing Education and Extension

John D. Hurrell, Ph.D., Professor Emeritus, English

Alex Kurak, Ph.D., Professor, General College

Archibald Leyasmeyer, Ph.D., Associate Professor of English

Peter Lock, Ph.D., Professor Emeritus of French and Italian

Toni McNaron, Ph.D., Professor of English and Women's Studies

Carol A. Miller, Ph.D., Associate Professor, General College

William E. Mishler, Ph.D., Associate Professor of Scandinavian

Victoria Poulakis, Ph.D., Professor of English, Northern Virginia Community College

Peter Reed, Ph.D., Professor of English

Amanda Roll-Kuhne, Teaching Assistant and Ph.D. candidate, English

Richard Shaw, M.A., Professor, Division of Liberal Arts, Minneapolis College of Art and Design

Robert Solotaroff, Ph.D., Professor of English

Frederick Suppe, Ph.D., Assistant Professor, History Department, Ball State University

Rafael Tilton, M.A., Teaching Assistant and Ph.D. candidate, English—Language and Literature

Many courses fulfill requirements for CEE certificates. See pages 107–116.

Engl 1016 Introduction to American Literature: Some Major Figures and Themes (A366)

3 assignments—1 exam—\$280—4 degree credits—text price \$67—study guide \$10—10 audiocassettes \$26.50—Griffin/Tilton



Introduction to some major themes and writers in American literature. Readings from Faulkner, Malamud, Melville, Fitzgerald, Chopin, Ellison, Henry James, and Dickey are complemented by audiocassette programs by Professor Edward Griffin. Emphasizes the American experience, myths of the American wilderness, dreams of innocence, freedom, and social responsibility among the varied peoples of the New World.

Engl 1017 Introduction to Modern Poetry (A380)

5 assignments—1 exam—\$280—4 degree credits—text price \$30—study guide \$10—10 audiocassettes \$26.50—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. Audio programs by Lynette Reini-Grandell complement this course.

Engl 1019 Introduction to Modern Drama (3677)

10 assignments—2 exams—\$280—4 degree credits—text price \$48—Hurrell/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 101 or equivalent)

Engl 1020 Introduction to Literature: Topics—Science Fiction and Fantasy (A364)

no assignments—2 exams—\$280—4 degree credits—text price \$54—study guide \$10—10 audiocassettes \$26.50—Hodgell



Deals with the evolution of 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 Heinlein, among others, and also the contributions of such eminent fantasists as Tolkien, CS Lewis, and Richard Adams.

Engl 1591 Literature of American Minorities (A379)

10 assignments—2 exams—\$280—4 degree credits—text price \$86—study guide \$10—10 audiocassettes \$26.50—Roll-Kuhne and Heacock



Representative works by Afro-American, American Indian, Asian American, and Chicano/Chicana writers. Examination of relevant social factors. Audio programs by Amanda Roll-Kuhne and Lynette Reini-Grandell complement this course.

Engl 3111 Survey of English Literature I (3657)

12 assignments—1 exam—\$294—4 degree credits—text price \$44—1 audiocassette \$3.75—McNaron



A historical survey of major figures, movements, and trends in English literature. This course focuses on medieval and Renaissance literature, especially Chaucer, Shakespeare, Marlowe, and the metaphysical poets.

Engl 3112 Survey of English Literature II (3658)

12 assignments—1 exam—\$294—4 degree credits—text price \$52—McNaron

A continuation of Engl 3111, this course focuses on Restoration and 18th century literature, especially Milton, Johnson, Swift, Austen, and Pope.

Engl 3113 Survey of English Literature III (3659)

15 assignments—no exams—\$294—4 degree credits—text price \$50—McNaron

A continuation of Engl 3112, this course focuses on romantic and Victorian literature, especially Wordsworth, Keats, Wollstonecraft, Tennyson, the Brownings, the Shelleys, and Dickens.

Engl 3241 Shakespeare I (A378)

12 assignments—2 exams—\$294—4 degree credits—text price \$37—study guide \$10—10 audiocassettes \$26.50—Shaw



Study of Shakespeare's early and middle plays, with attention to history, literary values, and theatrical performance. Students read: *A Midsummer Night's Dream*; *Romeo and Juliet*; *Richard II*; *Henry IV, Part I*;

Geography of Minnesota (Geog 3111) comes with a video series that takes you on location throughout Minnesota.



Toni McNaron, who grew up in the southern United States, has taught at the University of Minnesota for nearly 30 years. She began her studies as a Renaissance scholar, but later branched out into feminist literature and criticism. A recipient of a 1990 CEE Distinguished Teaching Award, McNaron's autobiographical work, *I Dwell in Possibility* (Feminist Press), won widespread acclaim when it was published in 1991.

Henry V; Much Ado About Nothing; Julius Caesar; Comedy of Errors; Othello; and Hamlet. Students may begin with either Shakespeare I or II; both courses contain introductory materials. The same audiocassettes are used for Engl 3241 and Engl 3242.

Engl 3242 Shakespeare II (A377)

12 assignments—2 exams—\$294—4 degree credits—text price \$29—study guide \$10—10 audiocassettes \$26.50—Shaw



Study of Shakespeare's middle and late periods. In addition to history and literary values, extra attention is given to reading and imagining theatrical performance. Students read *As You Like It, Macbeth, King Lear, Antony and Cleopatra, Coriolanus, The Winter's Tale, and The Tempest.* Engl 3241 is not a prerequisite; both courses contain introductory materials. The same audiocassettes are used for Engl 3241 and Engl 3242.

Engl 3410 Major American Writers: Fitzgerald and Hemingway (A365)

2 assignments—2 exams—\$294—4 degree credits—text price \$78—study guide \$10—10 audiocassettes \$26.50—Furia



An examination of the short stories of two contemporary early 20th century writers—F. Scott Fitzgerald and Ernest Hemingway—in the context of the literary, cultural, and artistic developments of the Jazz Age.

Engl 3410 Major American Writers: Voices and Visions in American Poetry (V361)

3 assignments—1 exam—\$294—4 degree credits—text price \$33—study guide \$10—video rental \$50 (\$25 refund)—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. **See the General Information section, Video-Assisted Courses.**

Engl 3411 Survey of American Literature to 1850 (3672)

13 assignments—1 exam—\$294—4 degree credits—text price \$43—McNaron

The development of American literature and thought from pre-Columbian days through the early American Renaissance. Authors studied include Native American and African American writers from the colonial and early national periods together with such major white writers as Poe, Emerson, and Hawthorne.

Engl 3412 Survey of American Literature, 1850-1900 (3682)

11 assignments—1 exam—\$294—4 degree credits—text price \$79—McNaron

Literature and thought from the American Renaissance through the 19th century. Authors

studied include Whitman and Dickinson as poetic giants, Twain and Chopin as experimental novelists.

Engl 3413 Survey of American Literature, 1900-1960 (A375)

15 assignments—no exams—\$294—4 degree credits—text price \$62—study guide \$10—10 audiocassettes \$26.50—McNaron



American literature during the breakup of social and literary norms caused by two world wars, feminism, and the emergence of the civil rights movement. Authors studied include Frost and Eliot, Fitzgerald, Hurston and Hughes, Wright, Olsen, and Rich.

Engl 3455 American Short Story (3684)

14 assignments—1 exam—\$294—4 degree credits—text price \$25—Furia

The historical developments of the literary forms of the short story in American culture. Students study the works of Irving, Poe, Melville, Crane, Cather, Hemingway, Updike, Cheever, and other authors.

Engl 3851 The English Language (V360)

10 assignments—no exams—\$294—4 degree credits—text price \$34—study guide \$10—video rental \$50 (\$25 refund)—Bridwell-Bowles/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. See the *General Information section, Video-Assisted Courses*.

Engl 3910 Topics in English and American Literature: The Celtic World (A360)

2 exams—\$294—4 degree credits—text price \$57—study guide \$10—10 audiocassettes \$26.50—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 (A374)

6 assignments—1 exam—\$294—4 degree credits—text price \$70—study guide \$10—10 audiocassettes \$26.50—Lock and Mishler



An intensive reading of the prose fiction and poetry of D. H. Lawrence alongside key texts by Freud. The course examines modern culture and its discontents as interpreted by these two writers.

Engl 3920 Topics in English and American Literature: Modern Women Writers (3685)

12 assignments—2 exams—\$294—4 degree credits—text price \$51—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 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 assignments—2 exams—\$294—4 degree credits—text price \$33—Poulakis

Short stories and novels by 19th century women writers—Jane Austen, Elizabeth Gaskell, Charlotte Brontë, 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.

If quarter of registration is important for financial aid or other reasons, see page 12 for term dates.

Engl 3940 Figures in English and American Literature: Hemingway (3689)

2 assignments—2 exams—\$294—4 degree credits—text price \$26—study guide \$10—Solotaroff

The course covers 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)

2 assignments—2 exams—\$294—4 degree credits—text price \$70—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 1011 or equivalent and 5 additional credits in either English or Humanities or Cultural Studies and Comparative Literature)

Engl 5175 Modern Drama to 1920: Pirandello to Pinter (3661)

3 assignments—4 exams—\$294—4 degree credits—text price \$78—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)

3 assignments—1 exam—\$294—4 degree credits—text price \$76—study guide \$10—10 audiocassettes \$26.50—C. G. Anderson



An introduction to the life and works of Joyce, including the epiphanies; the poems; the play *Dubliners*; and the novels *Portrait of the Artist as a Young Man* and *Ulysses* and bits of *Finnegan's Wake*.

Engl 5432 American Poetry (3687)

15 assignments—no exams—\$294—4 degree credits—text price \$82—Furia

An examination of American poetry from 1890 to 1945. 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 assignments—1 exam—\$280—4 degree credits—text price \$25—Gidmark

A historic survey and analysis of nearly 30 giants of American fiction. Students 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)

11 assignments—2 exams—\$280—4 degree credits—text price \$25—Kurak

By virtue of their brevity, short stories are an ideal introduction to literature for the beginner, and, at the same time, they represent the depth and variety of literature for the more sophisticated reader. This course encompasses ideas about the human experience by American, British, and continental authors.

GC 1816 Afro-American Literature (3612)

12 assignments—1 exam—\$280—4 degree credits—text price \$60—Miller/Gidmark

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.

GC 1836 Asian American Literature (3613)

10 assignments—1 exam—\$280—4 degree credits—text price \$61—Gidmark

The challenges presented to Asian immigrants and their children are examined, with attention to the clash between ethnic identity and the American situation. Students analyze both historical and contemporary works produced by writers such as Carlos Bulosan, Louis Chu, Joy Kogawa, and Amy Tan.

Minnesota high school students may be eligible for tuition funding under the Post-Secondary Enrollment Options Act. Call 612-626-1666 for information.

Creative and Professional Writing

Michael Dennis Browne, M.A., Professor, English

Alan Burns, Barrister-at-Law, Professor, English

Judith Daniel, M.A., Instructor, Creative Writing

Margot Fortunato Galt, Ph.D., English, Continuing Education and Extension

Patricia Hampl, M.F.A., Professor, English

Elizabeth Mische John, Teaching Assistant and Ph.D. Candidate, English

EngW 3102 Intermediate Fiction Writing (A353)

5 assignments—no exams—\$294—4 degree credits—text price \$23—study guide \$10—10 audiocassettes \$26.50—Burns/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. Course author is Alan Burns.

EngW 3103 Intermediate Poetry Writing (A350)

5 assignments—no exams—\$294—4 degree credits—text price \$46—study guide \$10—10 audiocassettes \$26.50—Browne/John



This course is intended to help students develop new ways of using language to explore the world around them and in them. There are numerous writing assignments and readings in contemporary poetry. Consideration is given to rhythm, image, structure, diction, voice, and tone.

EngW 3110 Topics in Creative Writing: Journaling into Fiction (A357)

7 assignments—no exams—\$294—4 degree credits—text price \$17—study guide \$10—10 audiocassettes \$26.50—Daniel



An exploration of the links between private and public writing. Students 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 5201 Journal and Memoir Writing (A358)

3 assignments—no exams—\$294—4 degree credits—text price \$43—study guide \$10—10 audiocassettes \$26.50—Hampl/Galt



Students read selected journals and memoirs, as well as complete exercises based on the readings. The journal writing process—informal and fragmentary—is the basis of all writing suggestions; students are encouraged to work from memory and personal experience. The course project is to write a memoir or autobiographical work. Students are encouraged to submit more polished memoir or autobiography and not the originating journal exercises.

EngW 5202 Journal and Memoir Writing II: Memory in Different Modes (3571)

5 assignments—no exams—\$294 (plus texts)—4 degree credits—Galt

Using the process of writing from brainstorming to drafting to revision, this course guides students to use memory in writing several genres: poems, traditional memoir essays, and fiction. The course also considers how cultures shape memory differently, suggesting work from Native American, Hispanic, Asian American, and African American writers. **This course is now in preparation; please inquire before enrolling.**

Entomology (Agriculture)

Basil Furgala, Ph.D., Professor, Entomology
Marla Spivak, Ph.D., Assistant Professor, Entomology

Ent 3020 Principles of Beekeeping (1005)

12 assignments—2 exam—\$330—4 degree credits—text price \$50—Furgala/Spivak

Learn the fascinating art and science of beekeeping. This course is useful to both nonexperienced and experienced beekeepers. Topics covered include history of beekeeping, life history and behavior of honey bees, colony and apiary management, pollination and hive products, and honey bee diseases and their control.

Independent
Study's newsletter, *Contact*, is published three times a year.

Family Studies (Human Ecology and GC)

Linda Burkett, Ph.D., Licensed Consulting Psychologist, St. Paul

William Doherty, Ph.D., Associate Professor, Family Social Science

David C. Dollahite, Ph.D. in Family Social Science

John Engel, Ph.D., Professor, Human Resources, University of Hawaii

Sander M. Latts, Ph.D., Associate Professor, General College

Marilyn M. Rossmann, Ph.D., Associate Professor, Vocational Technical Education

Mary Seabloom, Research Assistant and Ph.D. candidate, Family Social Science

FSoS 5001 Human Sexual Behavior (4103)

16 assignments—2 exams—\$412.50—5 degree credits—text price \$52—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 Systems (V417)

1 assignment—2 exams—\$412.50—5 degree credits—text price \$74—study guide \$10—video rental \$50 (\$25 refund)—Dollahite and Doherty/Seabloom



This course examines 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. The course offers an innovative format including lectures, simulated family interaction, and participation of a studio audience on videocassettes. (Prerequisites: Soc 1001 and Psy 1001 or equivalents)

See the General Information section, Video-Assisted Courses.

FSoS 5240 Special Topics: Violence in the Family (4113)

11 assignments—2 exams—\$330—4 degree credits—text price \$49—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 5240 Special Topics in Family Social Science: American Families in Transition (A416)

no assignments—2 exams—\$330—4 degree credits—text price \$75—study guide \$10—10 audiocassettes \$26.50—Rossmann



The family, a most basic institution, provides individuals with a link to society and a sense of identity. Through interviews with family scholars, this course presents a comprehensive view of family life and examines historical and contemporary family issues. The focus is on information related to rapid changes in family life. **This course will count toward the Master of Education in Home Economics Education. For other Master of Education degrees, check with your advisor to make sure the course is appropriate for your program.**

FSoS 5500 Racial and Ethnic Diversity in Families (4115)

9 assignments—no exams—\$330—4 degree credits—text price \$35—Burkett

Sociological overview of family structures and family values of various American racial and ethnic groups, including African Americans, Native Americans, Mexican Americans, Jews, and Asian Americans. This course combines a study of research and case studies with individual projects to develop and enrich understanding of cultural diversity. Students may receive credit for only one of these courses: FSoS 5500 or FSoS 3240, Minority Families in the United States.

Five new or updated biology courses are available.

GC 1722 Home Life: Parent-Child Relationships (4109)

10 assignments—2 exams—\$280—4 degree credits—text price \$74—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.

Finance (Management)

John W. Reik, M.B.A., J.D., Finance, Continuing Education and Extension

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)

no assignments—2 exams—\$330—4 degree credits—text price \$60—Reik

A comprehensive, analytical introduction to the principal concepts of finance. All major business financial decisions are discussed, including balance-sheet and income-statement management, 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 1050 or 1025 and at least 90 credits completed or in progress)

Food Science and Nutrition (Agriculture and Human Ecology)

David Smith, Ph.D., Associate Professor, Food Science and Nutrition
Edmund A. Zottola, Ph.D., Professor of Food Science and Nutrition

FScN 1102 Technology of Food Processing (4304)

14 assignments—3 exams—\$280—4 degree credits—text price \$63—Zottola/Smith

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), and cereal and oilseed processing are considered. (Prerequisite: high school chemistry and biology)

Forest Resources (Natural Resources)

Harold Scholten, Ph.D., Professor of Forest Resources

FR 1201 Conservation of Natural Resources (4203)

11 assignments—2 exams—\$210—3 degree credits—text price \$49—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 and Italian (CLA)

French

F.R.P. Akehurst, Ph.D., Professor of French
Cheryl Alcaya, M.A., Teaching Assistant and Ph.D. candidate, Education
Peter W. Lock, Ph.D., Professor Emeritus of French and Italian

Note: Students are discouraged from enrolling concurrently in two language courses at the 1xxx level.

English professors Philip Furia and Archibald Leyasmeyer are winners of the CEE Distinguished Teaching Award.

Fren 0001 Reading French (5718)

17 assignments—1 exam—\$280—no credit—text price \$31—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 assignments—1 exam—\$350—5 degree credits—text price \$72—8 audiocassettes \$21.50—Akehurst/Alcaya



An audio-lingual approach to elementary French, adapted for home use.

Fren 1102 Beginning French II (5712)

7 assignments—1 exam—\$350—5 degree credits—text price \$72—5 audiocassettes \$13.75—Akehurst/Alcaya



Continuation of French 1101. (Prerequisite: Fren 1101 or 1 year high school French)

Fren 1103 Beginning French III (5713)

7 assignments—1 exam—\$350—5 degree credits—text price \$72—5 audiocassettes \$13.75—Akehurst/Alcaya



Continuation of French 1102. (Prerequisite: Fren 1102 or 2 years high school French)

Fren 3104 French Literary Texts: Novel, Poetry, Drama (5710)

15 assignments—1 exam—\$294—4 degree credits—text price \$30—Akehurst

Provides training in reading literary works of poetry, drama, and prose. Completely in French.

Fren 3602 Literature in English Translation: Flaubert and Modern Writing (5714)

6 assignments—1 exam—\$294—4 degree credits—text price \$29—supplement \$10—Lock

An intensive reading in English of major works by Flaubert in the context of Freudian criticism and modern writing.

Italian

Lucyann Carlone, M.A., Teaching Specialist, French and Italian

Ital 1101 Beginning Italian I (5402)

7 assignments—1 exam—\$350—5 degree credits—text price \$89—4 audiocassettes \$11.50—Carlone



This course teaches fundamental linguistic skills. Students learn not only to read and understand Italian, but also to speak and write correctly using basic structures and vocabulary. The recently published instructional materials also introduce many cultural aspects of contemporary Italian life.

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

GC 0402—Grammar and Usage Review, p. 42

GC 1355—Ethics, p. 73

GC 1365—Literatures of the U. S., p. 53

GC 1371—Literature: Reading Short Stories, p. 53

GC 1816—Afro-American Literature, p. 53

GC 1836—Asian American Literature, p. 53

Science, Business, and Mathematics

GC 0611—Mathematics Skills Review, p. 70

GC 0621—Elementary Algebra, p. 70

GC 0625—Intermediate Algebra, Part I, p. 70

GC 0631—Intermediate Algebra, Part II, p. 70

GC 1161—Solar System Astronomy, p. 34

GC 1162—Stellar Astronomy, p. 35

GC 1166—Principles of Chemistry, p. 38

“The instructor was organized, helpful, and had a marvelous plan. The course was great!” (student in Engl 3242)

- GC 1235—Law in Society, p. 37
- GC 1454—Statistics, p. 85
- GC 1511—Intro. to Modern Business, p. 37
- GC 1513—Principles of Small Business Operations, p.37
- GC 1534—Practical Law, p. 38
- GC 1540—Accounting Fundamentals I, p. 38
- GC 1542—Accounting Fundamentals II, p. 38
- GC 1551—Marketing: Introduction, p. 38
- GC 1553—Marketing: Principles of Management, p. 38
- GC 1571—Introduction to Microcomputer Applications, p. 44
- GC 1572—Intro. to Computer Programming, p. 44

Social and Behavioral Sciences

- GC 1283—Psychology of Human Development, p. 78
- GC 1284—Behavior Problems of Children, p. 39
- GC 1722—Home Life: Parent-Child Relationships, p. 56

Genetics

See *Biology*.

Geography (CLA)

- Eric Anderson, Ph.D., Geography*
- John Borchert, Ph.D., Regents' Professor Emeritus, Geography*
- Philip Gersmehl, Ph.D., Professor, Geography*
- Daniel Hammel, M.A., Teaching Assistant, Geography*
- Paul Roebuck, M.A., Teaching Assistant and Ph.D. candidate, Geography*
- Kathleen Schroeder, Teaching Assistant and Ph.D. candidate, Geography*
- Roderick H. Squires, Ph.D., Associate Professor of Geography*
- Barbara VanDrasek, M.A., Teaching Assistant and Ph.D. candidate, Geography*
- Althea Willette, Teaching Assistant and Ph.D. candidate, Geography*
- James E. Young, Ph.D., Geography*

Geog 1501 The Language of Maps (4409)

13 assignments—4 exams—\$350—5 degree credits—text price \$29—Gersmehl/Hammel

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.



Jim Young (left) completed his Ph.D. in Geography in 1993 and teaches at Appalachian State University in Boone, N.C. Young worked as a school psychologist for many years before returning to college to study geography. In addition to developing the Language of Maps, he wrote Geog 3181, *Russia and Environs*, for Independent Study. **Phil Gersmehl** (center) is a professor of geography and American Studies at the University, where he specializes in resource analysis, map animation, and the geography of the United States and Canada. **Gary Komoto's** main interests are urban geography, residential mobility, neighborhoods, and housing. He is working on his Ph.D. in geography at the University while teaching courses in Barron County, Wisconsin.

Geog 3101 Geography of the United States and Canada (4453)

\$294 (plus texts)—4 degree credits—Anderson/Willette

Interaction of the aspirations and abilities of different groups of people with the complexities of the natural environment to produce regional differentiation of the United States and Canada.

Geog 3111 Geography of Minnesota (V443)

12 assignments—no exams—\$294—4 degree credits—text price \$38—study guide \$10—video rental \$50 (\$25 refund)—Borchert



The changing geography of Minnesota and the Upper Midwest. Explores the legacy from the railroad era, transformation in the auto-air age, and the emerging future. See the *General Information* section, *Video-Assisted Courses*.

Geog 3111 Geography of Minnesota (T443)

Television Course—12 assignments—no exams—\$294—4 degree credits—text price \$38—study guide \$10—Borchert



See above. **Broadcast: winter 1994 on KTCI (Channel 17) and KWCM (Channel 10); see the *Technology-Assisted Courses* section.**

Geog 3121 Geography of Latin America (4450)

7 assignments—1 exam—\$294—4 degree credits—text price \$65—study guide \$10—video rental \$50 (\$25 refund)—Schroeder/Roebuck

NEW



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 on people and their use of the land is emphasized. Problems are considered on both a national and regional basis. Students view either *Missing* or *Official Story*. See the *General Information* section, *Video-Assisted Courses*.

Geog 3181 Russia and Environs (4452)

12 assignments—2 exams—\$294—4 degree credits—text price \$63—Young/VanDrasek

An introduction to the diverse characteristics and regions of the former Soviet Union. Emphasizes a topical analysis of the physical, cultural, and economic phenomena in the former U.S.S.R., including the impact of present political and economic trends. Each lesson examines one or two major regions of the former Soviet Union.

Geog 3355 Environmental Problems (4454)

4 assignments—no exams—\$294—4 degree credits—no required text—supplement \$9—Squires

Defining and “solving” environmental problems; implementing “solutions.”

Geology and Geophysics (IT)

Robert E. Sloan, Ph.D., Professor of Geology and Geophysics

Geo 1001 The Dynamic Earth: An Introduction to Geology (4501)

16 assignments—2 exams—\$280—4 degree credits—text price \$59—Sloan

An introduction to general geology. Survey of the main features of the physical world and the processes that have evoked them. Topics: plate tectonics, rock formation, weathering, soils, deserts, oceans, and the phenomena of earthquakes, glaciers, and volcanoes. Rock and mineral collection recommended.

Geo 1002 Historical Geology (4503)

13 assignments—2 exams—\$280—4 degree credits—text price \$51—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 a lab.

Videocassette courses, marked with this symbol, use VHS cassettes:



German (CLA)

Gisela Peters, M.A., Lecturer, German and Russian, Macalester College
Leo Rigert, Teaching Assistant and Ph.D. candidate, German
Gerhard Weiss, Ph.D., Professor of German

Note: Students are discouraged from enrolling concurrently in two language courses at the 1xxx level.

Ger 1101 Beginning German I (5805)

15 assignments—1 exam—\$350—5 degree credits—text price \$47—2 audiocassettes \$6.75—Peters/Rigert



Introduction to the basic structures of the German language and its most frequently used vocabulary. Intended to give students a foundation in the skills of reading, writing, and listening.

Ger 1102 Beginning German II (5806)

15 assignments—1 exam—\$350—5 degree credits—text price \$60—4 audiocassettes \$11.50—Peters/Rigert



Continuation of Ger 1101. (Prerequisite: Ger 1101 or 1 year of high school German)

Ger 3610 German Authors and/or Topics in Translation: Postwar Developments as Seen Through the Works of Heinrich Böll (5809)

7 assignments—1 exam—\$294—4 degree credits—text price \$25—Weiss

Through reading Böll's novels and short stories, students gain an understanding of the development of West German society since 1945. In addition to reading Böll's fiction, students learn about postwar Germany through extensive study notes and some outside reading. Students also are asked to use media resources (films, magazines, video tapes, as available) to round out their knowledge of contemporary Germany. **Students must have access to a large library to obtain some of the required texts.**

Greek

See *Classical and Near Eastern Studies*.

History (CLA)

Sheldon Anderson, Ph.D., History
Deborah Bachrach, Ph.D., History, Continuing Education and Extension
Hyman Berman, Ph.D., Professor, History
Pradip Bhaumik, M.A., Teaching Assistant and Ph.D. candidate, History
Amalendu Chakraborty, Ph.D., Lecturer, Continuing Education and Extension
Edward Farmer, Ph.D., Professor, History
George D. Green, Ph.D., Associate Professor, History
Timothy Hoogland, Ph.D., History
Calvin Hoovestol, J.D., Ph.D., History
Courtney Bates Jaren, J.D., Assistant to the Dean, College of Liberal Arts
Anna Kirchmann, M.A., Research Assistant and Ph.D. candidate, History
David Kopf, Ph.D., Professor, History
Joy Lintelman, Ph.D., History
Russell Menard, Ph.D., Professor, History
Michael Metcalf, Fil. dr., Professor, History and Scandinavian Studies
Clark Miller, Ph.D., History
Paul L. Murphy, Ph.D., Professor, History
Thomas Noonan, Ph.D., Professor, History
Carla Rahn Phillips, Ph.D., Professor, History
William D. Phillips, Ph.D., Professor, History
Helena Pohlandt-McCornick, M.A., Teaching Assistant and Ph.D. candidate, History
Susannah Smith, M.A., Teaching Assistant and Ph.D. candidate, History
Edward Tebbenhoff, M.A., Teaching Assistant and Ph.D. candidate, History
Ruth Townsend, M.A., Research Assistant and Ph.D. candidate, History
Rudolph Vecoli, Ph.D., Professor, History
Linda Wimmer, M.A., Teaching Assistant and Ph.D. candidate, History
David Woodard, M.A., Instructor and Ph.D. candidate, History
Robert Wolff, Teaching Assistant and Ph.D. candidate, History

Hist 1001 Introduction to Modern European History Since the Middle Ages (4737)

12 assignments—2 exams—\$280—4 degree credits—text price \$58—Anderson/Smith

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.

You can listen to (or copy) course audiocassettes at the Learning Resources Center, 15 Walter Library.

Hist 1002 Introduction to Modern European History Since the Middle Ages (4738)

12 assignments—2 exams—\$280—4 degree credits—text price \$58—Anderson/Smith

Continuation of Hist 1001, but need not be taken in sequence. 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, and the French Revolution.

Hist 1003 Introduction to Modern European History Since the Middle Ages (4739)

12 assignments—2 exams—\$280—4 degree credits—text price \$58—Anderson/Smith

Continuation of Hist 1002, but need not be taken in sequence. 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 1011 Introduction to World History I (4821)

5 assignments—2 exams—\$350 (plus texts)—5 degree credits—Bhaumik

General introduction to world history approached from a comparative perspective. Includes material from Asia, Africa, and Latin America, as well as the West. Themes of livelihood and identity explore the impact of historical change on ordinary people. Covers the 5,000 years to A.D. 1450. **This course is now in preparation; please inquire before enrolling.**

Hist 1012 Introduction to World History II (4822)

9 assignments—1 exam—\$350—text price \$94—supplement \$10—video rental \$50 (\$25 refund)—5 degree credits—Wimmer

NEW Continuation of Hist 1011, but need not be taken in sequence. This course studies world civilizations in the era of global contact, 1450 to 1950, from a comparative perspective. Topics include linking of the globe through trade and migration; cultural, racial, and religious contact and clash in the Americas, Africa, and Asia; colonialism, industrialization, nationalism, independence movements, and decolonization. **See the General Information section, Video-Assisted Courses.**

**Hist 1013 Introduction to World History III (4823)**

5 assignments—2 exams—\$350 (plus texts)—video rental \$50 (\$25 refund)—5 degree credits—Wimmer and Pohlandt-McCormick



Continuation of Hist 1012, but need not be taken in sequence. Covers the 50 years since World War II. **See the General Information section, Video-Assisted Courses. This course is now in preparation; please inquire before enrolling.**

Hist 1151/3151 English History to the 17th Century (4709/4710)

12 assignments—2 exams—\$280/\$294—4 degree credits—text price \$80—Bachrach

First of a two-course sequence. Covers the history of England from earliest times to the death of Queen Elizabeth I. Students enrolling in the 3xxx-level course will be expected to do extra work.

Hist 1152/3152 English History from the 17th Century to the Present (4711/4712)

12 assignments—2 exams—\$280/\$294—4 degree credits—text price \$65—Bachrach

Second of a two-course sequence. Covers the period from the Stuart Accession through the cold war. Students enrolling in the 3xxx-level course will be expected to do additional work.

Hist 1301 American History I (4767)

12 assignments—no exams—\$350—5 degree credits—text price \$65—supplement \$10—video rental \$50 (\$25 refund)—Menard and Tebbenhoff/Wolff



United States history from colonial times through Reconstruction. A survey course emphasizing political, economic, social, and diplomatic history. Assignments cover a wide variety of topics, including the witchcraft trials of Salem, slavery and the American Republic, the Revolution, the Civil War, and more. Two videocassettes, *Glory* and *Drums Along the Mohawk* are required viewing. **See the General Information section, Video-Assisted Courses.**

**Two new courses
are available in
Educational
Psychology.**

Hist 1302 American History II (4729)

12 assignments—2 exams—\$350—5 degree credits—text price \$82—supplement \$10—video rental \$50 (\$25 refund)—Green and Hoovestol/Woodard



United States history survey from 1880 to the present. Students will study “Captains of Industry” and the rise of industrial America; the populist and progressive reform movements; the world wars; the depression and the New Deal; the cold war, the civil rights movement, the women’s movement, the Vietnam War, and the Reagan years. **See the General Information section, Video-Assisted Courses.**

Hist 1305 Cultural Pluralism in American History (A476)

7 assignments—3 exams—\$280—4 degree credits—text price \$63—study guide \$10—supplement \$10—10 audiocassettes \$26.50—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.

Hist 1451/3451 Survey of Civilizations in Ancient Asia (4741/4744)

15 assignments—1 exam—\$280/\$294—4 degree credits—text price \$32—Kopf/Chakraborty

Ancient societies in East, South, and West Asia. Students enrolling in the 3xxx-level course will be expected to do extra work.

Hist 3700 Topics in European History: Columbus and the Age of Expansion (4758)

12 assignments—no exams—\$294—4 degree credits—text price \$48—study guide \$10—Phillips and Phillips/Wimmer

This course places the familiar figure of Christopher Columbus in the context of the world of the late 15th 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.

Hist 3700 Topics in European History: The Life and Times of Peter the Great (4787)

6 assignments—no exams—\$294—4 degree credits—text price \$28—study guide \$10—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 are explored—Peter’s efforts to westernize Russia and his constant wars against neighboring countries, especially Sweden. Topics 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)

3 assignments—no exams—\$294—4 degree credits—text price \$49—study guide \$10—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 work with primary sources in translation as well as several scholarly texts.

Hist 3812 Civil War and Reconstruction (4755)

4 assignments—no exams—\$294—4 degree credits—text price \$53—Miller/Woodard

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.

Second Language Programs for Young Children (Elem 5321) has a video series that takes you into classrooms that have successfully taught second languages.

Hist 3822 The United States in the 20th Century: 1932-1960 (V473)

10 assignments—2 exams—\$294—4 degree credits—text price \$55—study guide \$10—video rental \$50 (\$25 refund)—Berman/Woodard



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 videocassette documentary narrated by Berman. **See the General Information section, Video-Assisted Courses.**

Hist 3841 American Business History (V476)

3 assignments—2 exams—\$294—4 degree credits—text price \$41—study guide \$10—supplement \$10—video rental \$50 (\$25 refund)—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. **See the General Information section, Video-Assisted Courses.**

Hist 3881 History of American Foreign Relations (4770)

12 assignments—2 exams—\$294—4 degree credits—text price \$62—Hoogland/Woodard

Foreign policy and diplomacy during the period of independence and territorial expansion. Topics include the diplomacy of the American Revolution, the War of 1812, the Monroe Doctrine and territorial expansion, American commercial expansion, foreign relations with American Indians, the Mexican War, and the diplomacy of sectionalism and the Civil War.

Hist 3883 History of American Foreign Relations 1945-1990 (4708)

12 assignments—2 exams—\$294—4 degree credits—text price \$63—Anderson/Woodard

American foreign policy from Franklin D. Roosevelt to Reagan. Deals with issues such as American isolationism, economic diplomacy, World War II, the cold war, and Vietnam.

Hist 3910 Topics in American History: A Century of American Immigration: 1884-1984 (4756)

3 assignments—no exams—\$294—4 degree credits—text price \$46—Lintelman and Vecoli/Kirchmann

This course presents a history of a century of American immigration. Considers 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 5331 American Constitutional History I (4804)

2 assignments—1 exam—\$294—4 degree credits—text price \$44—Murphy/Jaren

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 II (4805)

2 assignments—1 exam—\$294—4 degree credits—text price \$54—optional video rental \$50 (\$25 refund)—Murphy/Jaren



Continuation of Hist 5331, but need not be taken in sequence. Emphasizes the Constitution and the rule of law in modern America. Includes an optional videocassette 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 videocassette. **See the General Information section, Video-Assisted Courses.**

Wesbrook Hall is accessible by ramp and elevator.

Horticultural Science (Agriculture)

C. Gustav Hard, Ph.D., Professor of Horticultural Science and Landscape Architecture

Hort 1010 Home Horticulture: Landscape Gardening and Design (A515)

14 assignments—no exams—\$280—4 degree credits—text price \$43—study guide \$10—10 audiocassettes \$26.50—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 advanced or experienced gardeners. Text assignments and home projects with plants for the garden are required. Topics: planting, transplanting, seeds, soils, fertilizers, preparing beds and planting areas, selecting a good garden site, controlling garden pests, weeding, watering, cultivating, vegetable gardening, and landscape maintenance. Also discusses annuals, perennials, bulbs, and roses for northern gardens. The final project provides the fundamentals for home landscape design.

Humanities (CLA)

George Bisztray, Ph.D., Professor, Department of Slavic Languages and Literatures, University of Toronto

Dallas Ouren, Ph.D., Cultural Studies and Comparative Literature, Continuing Education and Extension

Hum 1001 Humanities in the Western World I (5205)

14 assignments—no exams—\$280—4 degree credits—text price \$62—Ouren

This course explores the 18th century Enlightenment and Romanticism. 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 Western World II (5202)

15 assignments—2 exams—\$280—4 degree credits—text price \$45—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 Western World III (5207)

15 assignments—no exams—\$280—4 degree credits—text price \$53—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.



Claudia Crawford received her Ph.D. in Comparative Literature from the University of Minnesota in 1985. An assistant professor in Cultural Studies and Comparative Literature at the University, she has taught a variety of courses, including "Comedy: Text and Theory," "The Age of Enlightenment," "The Aesthetics, Ideologies, and Political Economies of Advertising," and "Nietzsche and Literary Criticism." She has also published a book and several articles on philosophical and literary subjects.

Hum 1004 Humanities in the Western World IV (5208)

16 assignments—no exams—\$280—4 degree credits—text price \$57—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 1960s. Authors studied include Freud, Lenin, Malraux, T. S. Eliot, Solzhenitzyn, Brecht, and Dürrenmatt.

Hum 1111 European Heritage: Greece (5209)

15 assignments—no exams—\$280—4 degree credits—text price \$54—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 assignments—no exams—\$280—4 degree credits—text price \$56—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.

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.

Kenneth Gagala, Ph.D., Director of Labor and Urban Affairs, Labor Education Services
Earl Willford, M.Th., Lecturer in Industrial Relations

IR 0001 Supervision I: Elements of Supervision (2231)

11 assignments—1 exam—\$210—3 certificate credits—nondegree credit—text price \$50—Willford

A general discussion of basic principles of supervision in the office and factory. Survey of principles, methods, strategies, and applications for the handling of day-to-day problems of supervisors with emphasis on human relations and organizational development and change. Deals with selection, induction, and training of new employees, the 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 assignments—no exams—\$330—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 assignments—2 exams—\$330—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 United States, 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)

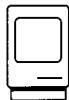
Note: Students taking Carlson School of Management upper division undergraduate courses through CEE are expected to have completed the equivalent of 90 quarter college credits with a minimum of a B- grade average.

The Changing Physical World (Phys 1003) uses helpful videos to make physics accessible for nonscience students.

*Carl Adams, Ph.D., Professor and Chair,
Information and Decision Sciences*

IDSc 1010 Fundamentals of Information Development and Use (2283)

\$280 (plus texts)—4 degree credits—Adams



Explores the concepts and skills 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 must be able to use a computer in the University's computer labs. **See the *Technology-Assisted Courses* section. This course is now in preparation; please inquire before enrolling.**

Parking and building maps are printed on page 128 and the inside back cover of the bulletin.

Institute of Languages and Literatures (CLA)

Chinese

Chun-Jo Liu, Ph.D., Professor, East Asian Studies
Wenyng Zhang, M.A., Teaching Assistant and Ph.D. candidate, East Asian Studies

Chn 3165 Introduction to Chinese Literature (5507)

14 assignments—no exams—\$294—4 degree credits—text price \$26—Liu/Zhang

Survey of major Chinese literary movements from the emergence of the early Confucian canon to the 13th century. All readings are in English.

General and Applied Linguistics

Anne Loring, M.A., Teaching Assistant and Ph.D. candidate, Linguistics
George Yule, Ph.D., Associate Professor, Louisiana State University

Ling 1001 The Nature of Human Language (V352)

4 assignments—1 exam—\$280—4 degree credits—text price \$21—video rental \$50 (\$25 refund)—Yule/Loring



This introductory course presents a survey of the nature of human language, its properties, its possible origins, and how it differs from animal commu-

nication. 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. **See the *General Information* section, *Video-Assisted Courses*.**

Russian

Gary Jahn, Ph.D., Associate Professor of Russian and East European Studies
Catherine Kulesov, Ph.D., Professor Emeritus of Russian

Note: Students are discouraged from enrolling concurrently in two language courses at the 1xxx level.

Russ 1101 Beginning Russian I (6603)

9 assignments—2 exams—\$350—5 degree credits—text price \$25—15 audiocassettes \$39.50—Jahn



A multipurpose program of instruction in the fundamentals of the Russian language. Acquaints students with all four basic language skills: listening, reading, speaking, and writing.



Optional use of computer materials in IBM or Macintosh format (please call for information). See the *Technology-Assisted Courses* section.

Russ 1102 Beginning Russian II (6604)

10 assignments—2 exams—\$350—5 degree credits—text price \$25—16 audiocassettes \$42—Jahn



Continuation of Russ 1101. (Prerequisite: Russ 1101) **Optional use of computer materials in IBM or Macintosh format (please call for information). See the *Technology-Assisted Courses* section.**

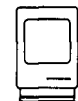


Russ 1103 Beginning Russian III (6605)

12 assignments—2 exams—\$350—5 degree credits—text price \$25—20 audiocassettes \$53.50—Jahn



Continuation of Russ 1102. (Prerequisite: Russ 1102) **Optional use of**



computer materials in IBM or Macintosh format (please call for information). See the *Technology-Assisted Courses* section.

Russ 3421 Russian Literature: Middle Ages to Dostoevsky (6650)

9 assignments—1 exam—\$294—4 degree credits—text price \$76—Jahn

The history of Russian literature from its beginning (about A.D. 1000) to the middle of the 19th century. Covers several well-known writers of the 19th century: Pushkin, Gogol, and Dostoevsky. Students read both literary works (in English) and scholarly materials (historical, biographical, critical commentary). Students complete nine five-to-eight page writing assignments.

Russ 3422 Russian Literature: Tolstoy to Present (6651)

12 assignments—1 exam—\$294—4 degree credits—text price \$68—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 Perestroika. Student read both literary works (in English) and scholarly material (historical, biographical, critical commentary). Assignments include four interpretive essays and six optional writings about the works read.

Italian

See *French and Italian*.

Jewish Studies (CLA)

David Cooperman, Ph.D., Professor of Sociology

Tzvee Zahavy, Ph.D., Professor of Classical and Near Eastern Studies

JwSt 3034 Introduction to Judaism (V864)

10 assignments—2 exams—\$294—4 degree credits—text price \$79—study guide \$10—video rental \$50 (\$25 refund)—Zahavy/staff



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. Also available as ReIS 3034. Students may receive credit for only one of these courses: JwSt 3034 or ReIS 3034. See the **General Information section, *Video-Assisted Courses***.

JwSt 3126 Modern Judaism (8610)

12 assignments—2 exams—\$294—4 degree credits—text price \$52—Zahavy/staff

This course explores the roots of modern Judaism in Eastern Europe, the immigration experience, and the formation of American Judaism as a distinctive religious system with its major components: the rabbi, the community, Israel, religious obligations, and theology.

JwSt 3521 The Holocaust (A861)

4 assignments—no exams—\$294—4 degree credits—text price \$37—study guide \$10—10 audiocassettes \$26.50—Cooperman/staff



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*.

Roy E. Carter, Jr., Ph.D., Professor Emeritus of Journalism and Sociology

Irene Clepper, Ph.D., Journalism, Continuing Education and Extension

Paul Froiland, M.A., Lecturer, Continuing Education and Extension

Nancy L. Roberts, Ph.D., Associate Professor of Journalism and Mass Communication

Inventing the Future (EdPA 5099) is available for graduate credit when you register in the TV version.

Jour 3173 Magazine Writing (3774)

20 assignments—no exams—\$294—4 degree credits—text price \$39—10 optional audiocassettes \$26.50—Roberts/Froiland



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 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 audiocassettes.

Jour 5501 Communication and Public Opinion I (3792)

12 assignments—2 exams—\$294 (plus texts)—4 degree credits—Carter

Students learn about theories of mass communication, models of the communication process, and research on public opinion and persuasion. The course also explains in nontechnical terms some of the methods used in the scientific study of the mass media and of public opinion, including polling. **This course is now in preparation; please inquire before enrolling.**

Jour 5601 History of Journalism (3791)

13 assignments—2 exams—\$294—4 degree credits—text price \$64—Clepper

From scratches in wet clay to messages bounced by satellite, communication has a fascinating history. This course covers First Amendment rights, press credibility and governments seeking cover from “sunshine” laws, muckraking, infomationals and advertorials, fictionalized documentaries, video newspapers, 500 cable choices, and other influences that keep reshaping journalism and the events and trends it records. Attention is also given to improving writing skills and identifying job opportunities.

Jour 5606 Literary Aspects of Journalism (3794)

15 assignments—\$294 (plus texts)—4 degree credits—Roberts

NEW This course studies the literary aspects of journalism as exemplified in, and influenced by, works of English and U.S. writers, past and present. These include John Hersey, Lillian Ross, Joan Didion, Truman Capote, Tom Wolfe, and others. The course explores the relationship between journalism and literature and how this relationship has

figured in the development of U.S. journalism. Written assignments focus on analysis of readings; also, students may opt to write a piece of their own literary journalism. **This course is now in preparation; please inquire before enrolling.**

Latin

See *Classical and Near Eastern Studies*.

Law

See *Business Law*.

Linguistics

See *Institute of Languages and Literature, General and Applied Linguistics*.

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.

Sumit Majumdar, Ph.D., School of Business Administration, University of Michigan
Richard O. Sietaff, M.B.A., Ph.D., Professor of Marketing, School of Business and Economics, University of Minnesota, Duluth
Mark Weber, Ph.D., J.D., Assistant Professor of Management, University of Wisconsin, LaCrosse
Robert M. Wiseman, M.B.A., Ph.D., Department of Management, Arizona State University

Mgmt 3001 Fundamentals of Management (2280)

14 assignments—2 exams—\$330—4 degree credits—text price \$52—Weber

Leadership and management functions such as those required to establish goals, policies, procedures, and plans. Motivation, planning,

“Could do it on my own time—didn't have to drive to campus and fight for parking—I learned more on my own than I would have in class.” (student in Fren 1103)

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 assignments—1 exam—\$330—4 degree credits—text price \$34—Wiseman/Sielaff

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.

Mgmt 3004 Business Policy: Strategy Formulation and Implementation (2281)

10 assignments—no exams—\$412.50—5 degree credits—text price \$57—Majumdar/Sielaff

Undergraduate-level capstone course designed to develop skill in the general management process of identifying and analyzing strategic issues and problems, establishing goals, and designing realistic programs of action. Concepts and approaches to strategic planning are explored and applied to solve strategy formulation and implementation problems. Usually the viewpoint of the general manager (department, division, or executive level) is taken. Must be taken A-F. (Prerequisite: senior and completion of business core)

Mgmt 3008 Entrepreneurship and the Smaller Enterprise (2285)

13 assignments—no exams—\$330—4 degree credits—text price \$54—Weber

NEW Assessment of opportunities and constraints in establishing and managing one's own firm; structuring a new venture, buying into an existing enterprise, owning an enterprise versus becoming a principal employee in a new venture. Case method. Designed to accommodate both undergraduate students who want course credit and nondegree seeking entrepreneurs who want information and planning guidelines to help them start and manage their own small business. (Prerequisite: completion of business core courses or permission of instructor)

Marketing (Management)

Also see *Business Studies*.

Richard O. Sielaff, M.B.A., Ph.D., Professor of Marketing, School of Business and Economics, University of Minnesota, Duluth

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 assignments—2 exams—\$330—4 degree credits—text price \$57—Sielaff

Basic policy and strategy issues in marketing and the environmental factors that affect these issues. Legal, behavioral, ethical, competitive, economic, and technological factors that affect product, pricing, promotion, and marketing-channel decisions. Must be taken A-F. (Prerequisites: Econ 1101 or equivalent and at least 90 credits completed or in progress)

Mathematics (IT and GC)

David L. Giese, Ph.D., Professor, General College

Alexander Gohar, M.S., Teaching Assistant, School of Mathematics

Shamlall Gupta, M.S., M.A., Lecturer, Continuing Education and Extension

Laura L. Koch, Ph.D., Assistant Professor, General College

Thomas Ressler, Ph.D., Professor, Graduate Program—Management, University of St. Thomas

Douglas Robertson, Ph.D., Professor, General College

V.C. Varadachari, Ph.D., Department of Mathematics, Lakewood Community College, White Bear Lake, Minnesota

Note: 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 their 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.

Toward an Understanding of Child Sexual Abuse (PubH 5609) is available for graduate credit when you register in the TV version.

In addition to the following noncredit courses in mathematics, certain courses available through the High School Program also fulfill entrance requirements of the Institute of Technology and other colleges. For Independent Study courses in high school mathematics, see the *High School Program* section.

GC 0611 Mathematics Skills Review (7214)

13 assignments—2 exams—\$280—no credit—text price \$47—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 assignments—3 exams—\$280—no credit—text price \$45—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 word problems from these areas. Prepares students for GC 0625, Intermediate Algebra, Part I. (Prerequisite: knowledge of arithmetic or GC 0611 or GC 0615 or Math 0005)

GC 0625 Intermediate Algebra, Part I (7219)

14 assignments—3 exams—\$280—no credit—text price \$45—supplement \$25—Giese

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)

14 assignments—3 exams—\$350—no credit—text price \$48—Giese

Basic knowledge of linear and quadratic equations and inequalities, exponents, factoring, rational expressions, roots, radicals, complex

numbers, and graphing assumed. Topics include quadratic equations, matrix solutions to systems of equations, general inequalities, conic sections, functions, logarithmic and exponential functions, introduction to sequences, series, and binomial theorem. (Prerequisite: GC 0625 with a grade of C better)

Math 1008 Trigonometry (7218)

12 assignments—2 exams—\$280—4 degree credits—text price \$48—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 assignments—3 exams—\$350—5 degree credits—text price \$54—Ressler

Functions, graphs, quadratic equations, inequalities, complex numbers, theory of equations, permutations and combinations, probability, systems of equations, graphing linear and quadratic equations, conic and standard position, logarithms. (Prerequisite: plane geometry, two years high school algebra and mathematics placement score, or plane geometry and GC 0631)

Math 1142 Short Calculus (7240)

16 assignments—3 exams—\$350—5 degree credits—text price \$43—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 1251-1252. (Prerequisite: Math 1111 or mathematics placement score)

Math 1201 Precalculus (7202)

16 assignments—4 exams—\$350—5 degree credits—text price \$44—Gupta

Students study inequalities; analytical geometry; complex numbers; binomial theorem;

You can register by phone, fax, mail, or in person.

mathematical induction; functions and graphs; and 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 assignments—3 exams—\$350—5 degree credits—text price \$55—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)

10 assignments—2 exams—\$350—5 degree credits—text price \$55—study guide \$10—video rental \$50 (\$25 refund)—Gohar



Analytical geometry and calculus of functions of one variable, applications. (Prerequisite: Math 1201 with a grade of C or better or Math 1111 and 1008 with grades of C or better, or 4 years high school math and math placement score) **See the General Information section, Video-Assisted Courses.**

Math 1251 One-Variable Differential and Integral Calculus I (7228)

16 assignments—3 exams—\$280—4 degree credits—text price \$72—Varadachari

Calculus of functions of one variable and related geometry and applications. (Prerequisites: 4 years of high school math, including trigonometry, or a grade of C or better in Math 1201 or 1008 and 1111, or equivalent)

Math 1252 One-Variable Differential and Integral Calculus II (7229)

\$280 (plus texts)—4 degree credits—Varadachari

Calculus of functions of one variable and related geometry and applications. (Prerequi-

sites: Math 1251 with a grade of C or better)

This course is now in preparation; please inquire before enrolling.

Math 3066 Elementary Differential Equations (7296)

16 assignments—3 exams—\$330—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, or equivalent, with a grade of C or better)

Math 3221 Introduction to Linear Algebra and Linear Differential Equations (7236)

16 assignments—3 exams—\$412.50—5 degree credits—text price \$50—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, or equivalent, with grade of C or better)

Mechanical Engineering (IT)

Tesfahun Berhe, Ph.D., Lecturer in Mechanical Engineering

ME 1025 Engineering Graphics (3026)

12 assignments—3 exams—\$280—4 degree credits—text price \$65—materials \$32—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)

"Independent Study allows me to overlap a course with the ones I take at night through Extension, because there are no time constraints. I do it in my spare time."
(student in Engl 3242)



Everett L. Sutton is the director of the School of Music at the University of Minnesota. He has received international attention for his teaching, performance, and directing activities, especially in the field of opera. Sutton has performed with the Aldeburgh Opera Festival in England and received a Gramophone Award and an Ovation Award for opera recordings. He was also a regular performer on the "Prairie Home Companion" radio show. Sutton, who teaches musicology and opera and directs the School of Music Opera Workshop, was a 1981 recipient of the Horace T. Morse-Amoco Foundation Award for distinguished teaching.

Music (CLA)

Alex Lubet, Ph.D., Associate Professor, School of Music

Johannes Riedel, Ph.D., Professor Emeritus, School of Music

Everett L. Sutton, Ph.D., Professor of Music

Janika Vandervelde, Ph.D., Instructor, School of Music

Mus 1002 Fundamentals of Music II (7312)

11 assignments—2 exams—\$280—4 degree credits—text price \$48—9 audiocassettes \$24—Vandervelde



Basic procedures for harmonizing melodies, including chord construction and succession, voice-leading, and stylistic considerations. Development of basic listening, singing, and keyboard facility. Rigorous review of music fundamentals. (Prerequisite: Mus 1001 or ability to read music in the treble and bass clefs and a thorough knowledge of intervals, scales, and chord qualities)

Mus 3011 Music Appreciation (A733)

7 assignments—2 exams—\$294—4 degree credits—no required text—14 audiocassettes \$37—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 3045 The Avant-Garde (7314)

11 assignments—\$294 (plus texts and audiocassettes)—4 degree credits—Lubet



A study of the composers of the American musical avant-garde, ca.



1950-70, including John Cage and Pauline Oliveros, in their sonic and

social contexts. Assignments include reading, listening, journal writing, original composition, and performance. No prior background in music required. **This course is now in preparation; please inquire before enrolling.**

Mus 5702 American Music: Twentieth-Century American Music (A731)

6 assignments—1 exam—\$294—4 degree credits—text price \$36—study guide \$10—10 audiocassettes \$26.50—Riedel



Analysis of American music during this century: folk, popular and classical, black and Chicano, opera and symphony, contemporary music.

Norwegian

See *Scandinavian Languages and Literature*.

Nursing (Nursing)

*Kären Alaniz, Ph.D., Assistant Professor,
School of Nursing*

*Sara DeHart, Ph.D., Associate Professor,
School of Nursing*

Joan Davis Feickert, M.A., School of Nursing

Nurs 3690/5690 Life Span Growth and Development I (8412/8413)

5 assignments—1 exam—\$165—2 degree credits—text price \$61—8 audiocassettes \$21.50—study guide \$10—video rental \$50 (\$25 refund)—Alaniz and DeHart/Feickert

NEW

Introductory course that incorporates biological, sociological, and psychological perspectives of human life span development from conception through adolescence. Nurs 3690/5690 and Nurs 3691/5691 may be taken concurrently. (Prerequisites:

general psychology and general biology) See the **General Information section, Video-Assisted Courses.**



Nurs 3691/5691 Life Span Growth and Development II (8414/8415)

5 assignments—1 exam—\$165—2 degree credits—text price \$61—5 audiocassettes \$13.75—study guide \$10—video rental \$50 (\$25 refund)—Alaniz and DeHart/Feickert

NEW

Introductory course that incorporates biological, sociological, and psychological perspectives of human life span development from young adulthood through aging and the death experience. Nurs 3690/5690 and Nurs 3691/5691 may be taken

concurrently. (Prerequisites: general psychology and general biology, Nurs 3690/5690 or equivalent, or consent of instructor) See the **General Information section, Video-Assisted Courses.**



Philosophy (CLA and GC)

Joseph Bessie, Ph.D. in Philosophy

*Daniel Flory, M.A., Teaching Assistant and
Ph.D. candidate. Rhetoric*

*Karen Gervais, Ph.D., Center Associate,
Center for Biomedical Ethics*

*Candido P. Zanoni, Ph.D., Professor, General
College*

Phil 1001 Introduction to Logic (7608)

13 assignments—3 exams—\$350—5 degree credits—text price \$42—Zanoni

NEW

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 assignments—2 exams—\$350—5 degree credits—text price \$32—Bessie/Flory

For much of its history, Western philosophy has been largely a matter of attempting to provide an unshakable foundation for either morals or the natural sciences. Most Western philosophers have thus spent their intellectual careers trying to define what knowledge and certainty are for the benefit of these two areas of knowledge. This course traces the history of that endeavor by looking at some examples of philosophers who are standardly cited as pillars of the Western theory of knowledge and metaphysics: Plato, Descartes, Hume, Kant, Wittgenstein, and Kuhn.

Phil 3305 Medical Ethics (7614)

\$367.50 (plus texts)—5 degree credits—Gervais

NEW

Moral problems confronting physicians, patients, and others concerned with medical treatment, research, and public health policy. **This course is now in preparation; please inquire before enrolling.**

GC 1355 Philosophy: Problems of Ethics (7606)

14 assignments—2 exams—\$280—4 degree credits—text price \$30—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.

**The Program
Clusters section
lists courses that
are related by
theme, bridging
the gaps between
disciplines.**

Physics (IT)

Robert L. Cassola, Ph.D., Director, Technology Programs, Control Data Corporation, Minneapolis

Roger S. Jones, Ph.D., Associate Professor of Physics

A new series of Spanish courses (Span 1101-1103) uses the nationally acclaimed *Destinos* multimedia package.

Phys 1001 The Physical World (7713)

22 assignments—3 exams—\$280—4 degree credits—text price \$62—Cassola

Fundamental laws and principles of the physical world discussed in the context of modern science and technology. Topics: motion of particles, laws of motion, momentum and energy conservation, gravity, fluids, temperature, heat, wave motion, the nature of light, optics, electricity, magnetism. No credit for IT students. (Prerequisite: one year high school algebra)

Phys 1003 The Changing Physical World (V773)

no assignments—4 exams—\$280—4 degree credits—text price \$26—study guide \$10—video rental \$50 (\$25 refund)—Jones



This course introduces nonscience students to the dramatic changing world of 20th-century physics. Against a background of history and philosophy, it highlights the new ideas and discoveries of relativity, cosmology, and quantum theory as seen on the vast scale of stars and galaxies, in the everyday realm of matter and energy, and down to the submicroscopic level of atoms and nuclei. **See the General Information section, Video-Assisted Courses.**

Phys 1041 Introductory Physics I (7741)

18 assignments—3 exams—\$280—4 degree credits—text price \$57—Cassola

Primarily for students interested in a general, non-calculus physics course, but also for CLA distribution requirements. Topics: 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; **concurrent registration in Phys 1045 is required.**)

Phys 1042 Introductory Physics II (7742)

16 assignments—3 exams—\$280—4 degree credits—text price \$57—Cassola

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; **concurrent registration in Phys 1046 is required.**)

Phys 1045 Introductory Physics Laboratory I (7718)

8 assignments—no exams—\$70—1 degree credit—lab book \$5—Cassola

Laboratory experiments offered in conjunction with Phys 1041. Experiments: graphical analysis of data, geometry of motion, gravitational field, energy, power, sound waves. S-N grading only. (Prerequisite: Phys 1041 or equivalent, or concurrent registration)

Phys 1046 Introductory Physics Laboratory II (7720)

6 assignments—no exams—\$70—1 degree credit—lab book \$5 (plus materials)—Cassola

Laboratory experiments offered in conjunction with Phys 1042. Experiments: probability and statistics, direct current circuits, magnetic fields, optics, diffraction. S-N grading only. (Prerequisite: Phys 1042 or equivalent, or concurrent registration)

Phys 1104 General Physics (7733)

16 assignments—3 exams—\$280—4 degree credits—text price \$53—Cassola

Primarily for premedical and biological science students. Topics: 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 assignments—3 exams—\$280—4 degree credits—text price \$53—Cassola

Second course in the series. Topics: fluid statics, fluid dynamics, elastic properties of solids, vibration, traveling, standing, and 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 assignments—3 exams—\$280—4 degree credits—text price \$53—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 1311 Comprehensive Introductory Physics with Calculus I (7743)

15 assignments—3 exams—\$280—4 degree credits—text price \$55—Cassola

Calculus-level general physics stressing the use of fundamental principles. Topics: vectors, kinematics in two and three dimensions, particle dynamics, work, energy, collisions, and gravitation. This course does **not** include a lab, and the physics department does not offer a separate lab. (Prerequisite: completion of, or

concurrent registration in, introductory calculus)

Phys 1321 Comprehensive Introductory Physics with Calculus II (7744)

15 assignments—3 exams—\$280—4 degree credits—text price \$55—Cassola

Calculus-level general physics stressing the use of fundamental principles. Topics: rigid-body kinematics and dynamics, statics, elasticity, oscillations, mechanical waves, sound, fluid statics and dynamics, heat and thermodynamics. This course does **not** include a lab, and the physics department does not offer a separate lab. (Prerequisite: Phys 1311 or equivalent)

Phys 1331 Comprehensive Introductory Physics with Calculus III (7745)

15 assignments—3 exams—\$280—4 degree credits—text price \$55—Cassola

Calculus-level general physics stressing the use of fundamental principles. Topics: the electric field, electric potential, capacitors, dielectrics, DC circuits, magnetic fields, induction, magnetic materials, and AC circuits. This course does **not** include a lab, and the physics department does not offer a separate lab. (Prerequisite: Phys 1321 or equivalent)



Sara DeHart is an associate professor of nursing at the University of Minnesota. She received a Ph.D. in child and experimental psychology and a B.S. and an M.S. in nursing from Case Western Reserve University in Cleveland. Early in her career she specialized in infants and young children, but later switched to a life span perspective to study the whole of human development. In her most recent research, DeHart evaluated the impact of addictions on health care outcomes for older adults.



Kären Alaniz helped develop "Introduction to Human Growth and Development Across the Life Span" in 1988. She is an assistant professor of nursing at the University, where she earned her doctorate in education. Her special interest is in the nursing care of children with chronic illness, and she has conducted research on the self-management of asthma by preschool children. Alaniz cofounded Camp Supertots, an asthma camp for young children, in the summer of 1992.

Phys 1341 Comprehensive Introductory Physics with Calculus IV (7746)

14 assignments—3 exams—\$280—4 degree credits—text price \$55—Cassola

Calculus-level general physics stressing the use of fundamental principles. Topics: Maxwell's equations, electromagnetic waves, nature and propagation of light, reflection, refraction, lenses, mirrors, optical instruments, interference, diffraction, special relativity, quanta, atomic spectra, nuclei, fission, and fusion. This course does **not** include a lab, and the physics department does not offer a separate lab. (Prerequisite: Phys 1331 or equivalent)

Phys 3501 Modern Physics (7704)

17 assignments—3 exams—\$330—4 degree credits—text price \$60—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)

Terence Ball, Ph.D., Professor of Political Science

Sara Binder, Teaching Assistant and Ph.D. candidate, Political Science

Evelyn Davidheiser, Ph.D., Assistant Professor, Political Science

Dorothy Dodge, Ph.D., Professor of Political Science, Macalester College

Sandra Johnstone, Teaching Assistant and Ph.D. candidate, Political Science

Brian Job, Ph.D., Political Science

Paula Tuchman, M.A., Teaching Assistant and Ph.D. candidate, Political Science

Pol 1001 American Government and Politics (7903)

18 assignments—2 exams—\$350—5 degree credits—text price \$52—Binder

Analysis of principles and processes of national, state, and local government in the United States. The relationships of political forces and philosophies. Topics: the Constitution, civil liberties, public opinion, interest groups and political parties, Congress, the judiciary, and the president.

Pol 1041 Contemporary Political Ideologies (V796)

3 assignments—2 exams—\$280—4 degree credits—text price \$53—study guide \$10—video rental \$50 (\$25 refund)—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. **See the General Information section, Video-Assisted Courses.**

Pol 3308 The United States Congress (7932)

12 assignments—2 exams—\$294—4 degree credits—text price \$87—Binder

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 3309 Judicial Process (7934)

12 assignments—3 exams—\$294—4 degree credits—text price \$71—supplements \$30—Johnstone

NEW Structure of the American judiciary; selection of judges; process of litigation; influences on judicial decisions; impact of and compliance with decisions; role of the Supreme Court in the American political system. (Prerequisite: Pol 1001 or equivalent)

Pol 3810 Topics in International Politics and Foreign Policy: Understanding War: Its Causes and Consequences (7929)

3 assignments—no exams—\$294—4 degree credits—text price \$91—study guide \$10—Job/Tuchman

Normative issues surrounding international violence; causes of violence and mechanisms for creating international peace; alternative structures for limiting future violence and maintaining peace.

Stress Management (Psy 3970) is an award-winning course.

Pol 5471 Government and Politics of the Former Soviet Union (7955)

12 assignments—2 exams—\$294—4 degree credits—text price \$98—Davidheiser

Analysis of politics in the former USSR, including its political heritage, the impact of Marxism-Leninism, principal institutions, historical developments since 1917, foreign policy, political elites, the decision-making process, political socialization, democratization, and selected economic and political issues.

Pol 5473 Chinese Government and Politics (7954)

12 assignments—2 exams—\$294—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)

15 assignments—2 exams—\$294—4 degree credits—text price \$48—Johnstone

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)

Portuguese

See *Spanish and Portuguese*.

Psychology (CLA)

Also see *Child Psychology*.

Sander M. Latts, Ph.D., Associate Professor, General College

Mary Jo Meadow, Ph.D., Professor of Psychology and of Religious Studies and Director of Religious Studies, Mankato State University

David J. Weiss, Ph.D., Professor, Psychology Department

Orville Weiszhaar, Ph.D., Psychology, Continuing Education and Extension

Psy 1001 Introduction to Psychology (8104)

20 assignments—2 exams—\$350 (plus texts—5 degree credits—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)

13 assignments—2 exams—\$294—4 degree credits—text price \$52—Meadow

This course is a basic introduction to the study of personality. It discusses 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)

12 assignments—2 exams—\$294—4 degree credits—text price \$57—Weiszhaar

Focuses on the theoretical causes of human behavior, the description of behavioral disorders, the etiologies of behavioral disorders, and treatment alternatives. Students may receive credit for only one of these courses: Psy 3604 or Psy 5604. (Prerequisite: Psy 1001)

Television courses are marked with this symbol:



Psy 3970 Directed Studies: Stress Management (8198)

12 assignments—2 exams—\$294—4 degree credits—text price \$32—1 audiocassette \$6—Weiszhaar

The concept of stress, various ways of measuring stress levels, the concept of coping, and various methods of coping. Information is 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.

GC 1283 Psychology of Human Development (4108)

12 assignments—2 exams—\$350—5 degree credits—text price \$50—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 helps students to understand a human being as a complex organism functioning in a complex environment.

Public Health (Public Health)

Also see *Veterinary Medicine*.

Robert W. ten Bensel, M.D., M.P.H., Professor, School of Public Health, Department of Pediatrics, and Adjunct Professor, Center for Youth Development and Research, School of Social Work

Marguerite Rheinberger, J.D., Teaching Assistant, School of Public Health

PubH 5609 Toward an Understanding of Child Sexual Abuse (V467)

11 assignments—no exams—\$408—4 degree credits—text price \$42—study guide \$10—video rental \$50 (\$25 refund)—ten Bensel/Rheinberger



The 10 programs of this course 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 future or current professional in public health, health sciences, social work, education, and law. Also available as SW 5010. Students may receive credit for only one of these courses: PubH 5609 or SW 5010. See the **General Information section, Video-Assisted Courses**.

PubH 5609 Toward an Understanding of Child Sexual Abuse (T467)

Television Course—11 assignments—no exams—\$408/\$684 (Grad. School, U of M)/\$396 (grad rate, other schools)—4 degree credits—text price \$42—study guide \$10—ten Bensel/Rheinberger



See above. If registering for graduate credit, enclose the correct tuition (see p. 23). **Broadcast: spring 1994 on KTCI (Channel 17) and KWCM (Channel 10); see the Technology-Assisted Courses section.**

PubH 5642 Child Abuse and Neglect (V465)

11 assignments—no exams—\$306—3 degree credits—text price \$22—study guide \$10—video rental \$50 (\$25 refund)—ten Bensel/Rheinberger



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. Includes examples of child abuse and neglect; discussion of why it occurs, its consequences, and how society can intervene and prevent. See the **General Information section, Video-Assisted Courses**.

Technical Writing for Engineers and Writing in the Social Sciences (Comp 3031 and Comp 3014) are available in versions that use computer software.



Gary Jahn holds a doctorate in Russian Language and Literature from the University of Wisconsin and has taught at the University of Minnesota, St. Olaf College, and the State University of New York at Buffalo. In addition to teaching courses in the Russian language, he is a scholar of the novels and stories of Leo Tolstoy. Jahn's latest work, *The Death of Ivan Leo Illich: An Introduction* (Twayne Press), is scheduled to be published in 1993. Jahn is the editor of the *Slavic and East European Journal*, the scholarly organ of the American Association of Teachers of Slavic and East European Languages.

Religious Studies (CLA)

William W. Malandra, Ph.D., Associate Professor, Classical and Near Eastern Studies
Tzvee Zahavy, Ph.D., Professor, Classical and Near Eastern Studies

Peter Ditmanson, Ph.D. candidate, East Asian Studies

ReIS 1031 Religions of South Asia (5523)

11 assignments—2 exams—\$280—4 degree credits—text price \$49—supplement \$10—video rental \$50 (\$25 refund)—Malandra/staff



Introduction to Hinduism, Buddhism, and Jainism. **See the General Information section, Video-Assisted**

Courses.

ReIS 1032 Religions of East Asia (5521.1)

13 assignments—1 exam—\$280 (plus texts)—4 degree credits—Ditmanson/staff

Religious aspects of Confucianism, Taoism, Buddhism, and Shintoism as practiced in East Asia. Also available as EAS 1032. Students may receive credit for only one of these courses: EAS 1032 or ReIS 1032. **This course is now in preparation; please inquire before enrolling.**

ReIS 3034 Introduction to Judaism (V553)

10 assignments—2 exams—\$294—4 degree credits—text price \$79—study guide \$10—video rental \$50 (\$25 refund)—Zahavy/staff



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. Also available as JwSt 3034. Students may receive credit for only one of these courses: ReIS 3034 or JwSt 3034. **See the General Information section, Video-Assisted Courses.**

Rhetoric (Agriculture)

Jill Gidmark, Ph.D., Professor, General College

Rhet 3562 Writing in Your Profession (3950)

20 assignments—no exams—\$330—4 degree credits—text price \$31—1 audiocassette \$4—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. The audiocassette is at the Minnesota Book Center. (Prerequisites: freshman communication requirement, Rhet 1151, junior status)

High school courses are listed on pages 101-106.

Russian

See *Institute of Languages and Literatures*.

Scandinavian Languages and Literature (CLA)

Scandinavian

William E. Mishler, Ph.D., Associate Professor, Scandinavian Studies

Scan 3602 The Scandinavian Fairy Tale as Literature (A631)

4 assignments—no exams—\$294—4 degree credits—text price \$22—study guide \$10—10 audiocassettes \$26.50—Mishler



An exploration of Hans Christian Andersen's stories and tales (in English).

Danish

Torben Staur, Teaching Assistant and Ph.D. candidate, Scandinavian Studies

Dan 1101 Beginning Danish I (6350)

15 assignments—\$350 (plus texts and audiocassettes)—5 degree credits—Staur



Development of reading, writing, and speaking skills.



Norwegian

William Solheim, Ph.D., Lecturer, Continuing Education and Extension

Note: Students are discouraged from enrolling concurrently in two language courses at the 1xxx level.

Nor 1101 Beginning Norwegian I (6303)

10 assignments—no exams—\$350—5 degree credits—text price \$71—4 audiocassettes \$104—Solheim



An introduction to basic Norwegian grammar, pronunciation, sentence structure, reading, and writing.

Emphasis placed on vocabulary and expressions used in everyday situations, while providing a foundation for further study. The audiocassettes are at the Minnesota Book Center.

Nor 1102 Beginning Norwegian II (6304)

11 assignments—no exams—\$350—5 degree credits—text price \$71—4 audiocassettes \$104—Solheim



Continuation of Nor 1101. The audiocassettes are at the Minnesota Book Center. (Prerequisite: Nor 1101 or equivalent)

Nor 1103 Beginning Norwegian III (6305)

12 assignments—no exams—\$350—5 degree credits—text price \$71—4 audiocassettes \$104—Solheim



Continuation of Nor 1102 with increased emphasis on reading and writing skills. The audiocassettes are at the Minnesota Book Center.

(Prerequisite: Nor 1102 or equivalent)

Nor 1104 Intermediate Norwegian I (6306)

14 assignments—3 exams—\$350 (plus texts and audiocassettes)—5 degree credits—Solheim



Further development of reading, writing, listening, and speaking skills. Grammar review. (Prerequisite: Nor 1103 or equivalent).



Nor 1105 Intermediate Norwegian II (6307)

12 assignments—2 exams—\$350 (plus texts and audiocassettes)—5 degree credits—Solheim

NEW

Continuation of Nor 1104 with particular emphasis on reading, writing, and listening skills. Authentic Norwegian texts are made more accessible with prereading strategies and reading/comprehension tasks appropriate at this level. Lessons center on specific aspects of Norwegian life and culture. (Prerequisite: Nor 1104 or equivalent) **This course is now in preparation; please inquire before enrolling.**

Nor 1106 Intermediate Norwegian III (6308)

12 assignments—2 exams—\$350 (plus texts and audiocassettes)—5 degree credits—Solheim

NEW

While a continuation of Nor 1105, this course includes more advanced texts that center on social issues. Comprehension and expression of critical thought are promoted through reading and writing tasks. Pronunciation and grammar review. Introduction of several advanced points of grammar. (Prerequisite: Nor 1105 or equivalent) **This course is now in preparation; please inquire before enrolling.**

Swedish

*Gören Stöckenström, Ph.D., Professor,
Department of Scandinavian Studies*
*Gunnar Thander, M.A., Teaching Assistant and
Ph.D. candidate, Department of Scandinavian
Studies*

Note: Students are discouraged from enrolling concurrently in two language courses at the 1xxx level.

Swed 1101 Beginning Swedish I (6900)

17 assignments—no exams—\$350—5 degree credits—text price \$73—4 audiocassettes \$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)

22 assignments—no exams—\$350—5 degree credits—text price \$73—2 audiocassettes \$6.75—Thander



Continued development of basic skills in reading, writing, and speaking. Exercises also include grammar and oral assignments. (Prerequisite: Swed 1101)

Swed 1103 Beginning Swedish III (6903)

20 assignments—no exams—\$350—5 degree credits—text price \$73—1 audiocassette \$3.75—Thander



A continuation of foundation skills in reading, writing, and listening. (Prerequisite: Swed 1102)

Swed 1104 Intermediate Swedish I (6904)

22 assignments—no exams—\$350—5 degree credits—text price \$73—1 audiocassette \$3.75—Thander



Further development of reading, writing, and listening skills; grammar review; composition. (Prerequisite: Swed 1103)

Swed 1105 Intermediate Swedish II (6905)

15 assignments—no exams—\$350—5 degree credits—text price \$127—4 audiocassettes \$11.50—Thander



Intended to allow students to gradually begin to master Swedish in advanced contexts. Texts by various Swedish writers. Grammar exercises cover a systematic overview of prepositions, word order, and sentence structure. Texts include two dictionaries. (Prerequisite: Swed 1104)

Swed 1106 Intermediate Swedish III (6906)

13 assignments—no exams—\$350—5 degree credits—text price \$96—2 audiocassettes \$6.75—Thander

NEW

Advanced texts focusing on four themes: Swedish history, Swedish culture, modern Sweden, and Swedish American immigration. Systematic review of grammar, as well as advanced points of grammar. (Prerequisite: Swed 1105)

You can earn a
**Liberal Arts
certificate**
entirely through
Independent Study.
See pages 108–109.

Swed 3670 Readings in Swedish Literary Texts (6907)

\$294 (plus texts and tapes)—4 degree credits—Stöckenström

Swedish immigrants and discussion of Swedes in America will be used to develop reading and writing skills. Samples from the taped interviews will be available on audiocassette.

(Prerequisite: Swed 1106 or equivalent) **This course is now in preparation; please inquire before enrolling.**

Social Work (Human Ecology)

Allister Butler, M.S.W., Teaching Assistant and Ph.D. Candidate, Social Work

George Hoshino, Ph.D., D.S.W., Social Work, Emeritus

Marguerite Rheinberger, J.D., Teaching Assistant and Ph.D. Candidate, School of Public Health

Robert W. ten BenseL, M.D., M.P.H., Professor, School of Public Health, Department of Pediatrics, and Adjunct Professor, Center for Youth Development and Research, School of Social Work

SW 1001 Introduction to American Social Welfare and Community Services (8692)

16 assignments—1 exam—\$350—5 degree credits—text price \$57—Hoshino/Butler

Survey of social services and their components, including fields of practice, multiple auspices, dependencies; numerous levels of participation, differing ideologies, methods of approach to social problems, and the dynamics of change from social movements to institutionalizations inherent in American social service delivery systems. Primarily about the “frames of reference” within which help is offered in American social services. The uneasy relationship between social service policies and professional social work practice. Equivalent to the course offered to on-campus students within the B.A. in Social Welfare Program. Seen as prerequisite for practice methods courses.

“Elem 5321 was an outstanding course in all ways. Readings were excellent, videos outstanding, choices for written assignments were good.”

SW 5010 Seminar: Special Topics—Toward an Understanding of Child Sexual Abuse (V467.1)

11 assignments—no exams—\$330—4 degree credits—text price \$42—study guide \$10—video rental \$50 (\$25 refund)—ten BenseL/Rheinberger



The 10 programs deal with a historical understanding of child sexual abuse, including definitions, dynamics, effects on the victim, how society intervenes, and prevention methods. Aimed at the future or current professional in public health, health sciences, social work, education, and law. Also available as PubH 5609. Students may receive credit for only one of these courses: SW 5010 or PubH 5609. **See the General Information section, Video-Assisted Courses.**

SW 5010 Seminar: Special Topics—Toward an Understanding of Child Sexual Abuse (T467.1)

Television course—11 assignments—no exams—\$330/\$684 (Grad. School, U of M)/\$396 (grad rate, other schools)—4 degree credits—text price \$42—study guide \$10—ten BenseL/Rheinberger



See above. Graduate School approval was pending when this bulletin was printed. Call 612-624-4393 for current information. If registering for graduate credit, enclose the correct tuition (see p. 23).

Broadcast: spring 1994 on KTCI (Channel 17) and KWCM (Channel 10); see the Technology-Assisted Courses section.

Sociology (CLA)

Nancy Wisely, Ph.D., Teaching Specialist, Sociology

Soc 5201 Introduction to Social Psychology (8676)

13 assignments—2 exams—\$294—4 degree credits—text price \$49—Wisely

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 on application of theories and concepts to everyday life.

Spanish and Portuguese (CLA)

Portuguese

Ronald W. Sousa, Ph.D., Professor, *Comparative Literature*, and Professor, *Spanish and Portuguese*

Port 3970 Directed Studies: The Everpresent Past in Spanish and Portuguese Culture (A684)

no assignments—2 exams—\$294—4 degree credits—study guide \$10—11 audiocassettes \$29—Sousa



See SpPt 3610 (Spanish). Most readings are in the original language. (Prerequisite: Portuguese major)

Spanish

Susana Blanco-Iglesias, Teaching Assistant and Ph.D. candidate, *Spanish*

Joaquina Broner, Teaching Assistant and Ph.D. candidate, *Spanish*

María A. Martín-Morán, Teaching Assistant and Ph.D. candidate, *Spanish*

María B. Miguel-Pérez, Teaching Assistant and Ph.D. candidate, *Spanish*

Joanna O'Connell, Ph.D., Assistant Professor, *Spanish and Portuguese*

Luis Ramos-García, Ph.D., Director of Undergraduate Studies, *Spanish and Portuguese*

Ronald W. Sousa, Ph.D., Professor, *Comparative Literature*, and Professor, *Spanish and Portuguese*

Note: Students are discouraged from enrolling in two language courses at the 1xxx level.

Span 0221 Reading Spanish (6817)

13 assignments—1 exam—\$280—no credit—text price \$34—staff

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 (6811)

9 assignments—2 exams—\$350 (plus texts and tapes)—5 degree credits—video rental \$50 (\$25 refund)—staff



Fundamentals of Spanish. Students develop listening and speaking skills and learn about the cultures of Spain and Latin America by viewing 18 episodes of a Spanish soap opera, *Destinos*, reading its accompanying textbook and study guide, and listening to audiocassettes. See the *General Information* section, *Video-Assisted Courses*.

Span 1102 Beginning Spanish II (6812)

8 assignments—2 exams—\$350 (plus texts and tapes)—5 degree credits—video rental \$50 (\$25 refund)—staff



Continuation of Span 1101. If you enrolled in Span 1101 before July 1993, please contact the Department of Independent Study regarding enrollment in the correct sequence. (Prerequisite: Span 1101 or equivalent) See the *General Information* section, *Video-Assisted Courses*.

Span 1103 Beginning Spanish III (6813)

10 assignments—2 exams—\$350 (plus texts and tapes)—5 degree credits—video rental \$50 (\$25 refund)—staff



Continuation of Span 1102. If you enrolled in Span 1102 before July 1993, please contact the Department of Independent Study regarding enrollment in the correct sequence. (Prerequisite: Span 1102 or equivalent) See the *General Information* section, *Video-Assisted Courses*.

Span 1104 Intermediate Spanish I (6809)

10 assignments—2 exams—\$350—5 degree credits—text price \$89—5 audiocassettes \$13.75—staff



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)

Nurs 3690/5690 and 3691/5691 use nationally acclaimed video and audio programs.

Span 1105 Intermediate Spanish II (6810)

10 assignments—2 exams—\$350—5 degree credits—text price \$89—5 audiocassettes \$13.75—staff



Continuation of Span 1104. (Prerequisite: Span 1104 or equivalent)

Span 1502 Cultures and Civilizations of Latin America: Indian, European-Colonial, African Roots (6843)

14 assignments—2 exams—\$280 (plus texts)—4 degree credits—O'Connell

This course focuses on the cultures and civilizations of Latin American before and after 1492. Emphasis on indigenous cultures before the European invasion, the process of Spanish and Portuguese colonization, and the complex interactions between indigenous, European, and African peoples during the three centuries of European colonial rule. In English. Not to be used for Spanish or Portuguese major credit.

This course is now in preparation; please inquire before enrolling.

SpPt 3610 Topics in Spanish-Portuguese Civilization and Culture (A682)

no assignments—2 exams—\$294—4 degree credits—text price \$41—11 audiocassettes \$29—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 are 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 English translation.



Front row: Luis Ramos-García completed his Ph.D. in Spanish Peninsular Literature at the University of Texas, Austin. The director of undergraduate studies in the Department of Spanish and Portuguese, he is a native of Lima, Peru. *Susanna Blanco-Iglesias*, a native of Santurce, Vizcaya, Spain, is the course supervisor for Spanish 1104. *Back row, from left: Paul Gustino*, who was born in the Philippines, grew up in the Midwest. He is a graduate student in Spanish linguistics. *María B. Miguel-Pérez* is a native of Bilbao, Vizcaya, Spain, and the course supervisor for Spanish 1106. *Joaquina C. Broner* is from Caracas, Venezuela, and has taught Spanish courses at the University of Minnesota since 1989. *María A. Martín-Morán* is a native of Getxo, Vizcaya, Spain, and the course supervisor for Spanish 1102.

Span 3970 Directed Studies: The Everpresent Past in Spanish and Portuguese Culture (A683)

no assignments—2 exams—\$294—4 degree credits—study guide \$10—supplement \$10—11 audiocassettes \$29—Sousa



See above. Most readings are in the original language. (Prerequisite: Spanish major)

Statistics (CLA and GC)

Donald Berry, Ph.D., Professor, School of Statistics

Joan Garfield, Ph.D., Associate Professor, General College

Stat 1001 Introduction to the Ideas of Statistics (7272)

9 assignments—no exams—\$280—4 degree credits—no required text—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)

GC 1454 Statistics (7273)

16 assignments—2 exams—\$350—5 degree credits—text price \$59—Garfield

Introduction to modern statistics, emphasizing problem solving through statistical decision making. Topics: organization and presentation of data, summary statistics, sampling, probability, distributions, simple estimation, correlation, and hypothesis testing. (Prerequisite: elementary algebra)

Swedish

See *Scandinavian Languages and Literature*.

Textiles and Clothing (Human Ecology)

Shari Peterson, Ph.D., Assistant Professor, General College

TexC 1641 Introduction to Retail Merchandising (2004)

10 assignments—3 exams—\$210—3 degree credits—text price \$58—Peterson

General aspects of retailing, including types of retailers, market research, management, buying, promotion, and trends. Focuses on aspects of retailing careers within the structure of existing retail firms. For their major project, students conduct research on retail consumers. Together, TexC 1641 and 1642 are the equivalent of TexC 1211.

TexC 1642 Seminar: Introduction to Retail Merchandising (2205)

3 assignments—no exams—\$70—1 degree credit—no required text—Peterson

An experiential, field-based course designed to interact with TexC 1641; students conduct several interviews with people engaged in various retailing careers. Together, TexC 1641 and 1642 are the equivalent of TexC 1211.

Theatre Arts (CLA)

Arthur Ballet, Ph.D., Professor Emeritus, Theatre Arts

Charles Nolte, Ph.D., Professor of Theatre Arts
William Sonnega, M.F.A., Teaching Assistant and Ph.D. candidate, Theatre Arts

Th 1101 Introduction to the Theatre (V406)

3 assignments—1 exam—\$280—4 degree credits—text price \$66—video rental \$50 (\$25 refund)—Ballet



An eclectic overview of Western drama from Aeschylus to August Wilson, from Shakespeare to Sam Shepard, focusing on the plays, playwrights, and players that have shaped today's theatre, film, and television. Students are required to attend theatre performances and to enhance their critical skills and understanding of the processes and forms of drama and of production. **See the General Information section, Video-Assisted Courses.**

For more information about a course, call (612-624-0000; 1-800-234-6564) or write for a free copy of the study guide introduction.

Th 5115 Playwriting (A405)

2 assignments—no exams—\$294—4 degree credits—text price \$35—study guide \$10—10 audiocassettes \$26.50—Nolte/Sonnega



This course is designed to introduce the craft of writing for the theatre to students who have no experience in playwriting. In providing a forum in which students complete their first one-act play, the course emphasizes the technical elements and vocabulary of playwriting, as well as the nature of the writing experience—from germinal idea to completed script—and strategies for taking a new play to market.

Th 5186 History of the American Theatre (A401)

no assignments—1 exam—\$294—4 degree credits—text price \$49—study guide \$10—11 audiocassettes \$29—Nolte/Sonnega



From colonial days to the present, the theatre has dynamically mirrored American cultural, social, and political life. This course examines the wide variety of playwrights, performers, and productions that have participated in this mirroring process, from the agitprop plays of the Revolutionary War to contemporary experimental works performed Off Broadway.

Some courses now use computer software. See the Technology-Assisted Courses section.

Veterinary Medicine (Veterinary Medicine)

Joseph S. Quigley, D.V.M., Instructor, Veterinary Public Health

CVM 3100 Perspectives: Interrelationships of People and Animals in Society Today (A461)

4 assignments—no exams—\$245 (plus texts)—2 degree credits—study guide \$10—10 audiocassettes \$26.50—Quigley



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)

Rachael E. Martin, M.A., Instructor, Women's Studies, University of Minnesota, Duluth
Michelle Mouton, M.A., Teaching Assistant and Ph.D. candidate, History
Jacquelyn Zita, Ph.D., Associate Professor, Women's Studies

WS 1990 Northern Minnesota Women: Myths and Realities (A882) (U of M Duluth)

9 assignments—1 exam—\$210—3 degree credits—text price \$39—study guide \$10—supplement \$10—10 audiocassettes \$26.50—Martin



This course examines the stereotypes and realities of life for Northern Minnesota Indian, Yankee, and immigrant women from early settlement times to the present. The historical research projects can be written using topics from the student's geographical location. Credits for this Duluth course will appear on your U of M Twin Cities transcript.

WoSt 3202 Biology of Women (8806)

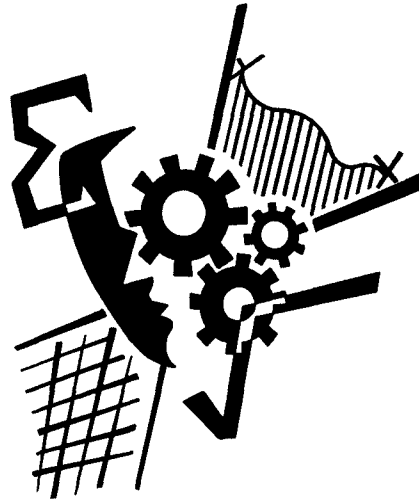
\$294 (plus texts)—4 degree credits—Zita

Physiology, anatomy, and endocrine aspects of women's life cycles. **This course is now in preparation; please inquire before enrolling.**

WoSt 3910 Topics in Women's Studies: Women Between Victorianism and Emancipation (8821)

3 assignments—no exams—\$294 (plus texts)—4 degree credits—Mouton

This course explores 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.



Program clusters are noncertificate interdisciplinary groups of courses with related subject matter. We designed them to enable you to bridge courses and disciplines and to see the interdependence of different bodies of knowledge. You might want to think of program clusters as building blocks in the completion of a certificate program, a minor, or a major. Call CEE Counseling (612-625-2500) or consult with your academic advisor to see if a cluster you find interesting can also serve as a building block.

Ethics and Society

For several reasons (degradation of the environment, the collapse of many of our financial institutions, the disintegration of our communities), students are becoming more interested in the study of ethics in relationship to modern society. The courses in this cluster focus attention on the ethics of government, business, management, and science. (For courses dealing with the development of moral thought in the West and the East, see the *Course Descriptions* section, *Religious Studies* and *Philosophy*).

AnPl 3010—Environment and World Food Production (in preparation)

Biol 1101—Heredity and Human Society

Biol 3051—Biology and the Future of the Earth

BGS 3002—Business and Society: Ethics and Stakeholder Management

CSci 3001—Perspectives on Computers and Society

EEB 3001—Introduction to Ecology

Mgmt 3002—Psychology of Management

Mgmt 3004—Business Policy: Strategy Formulation and Implementation

Mktg 3000—Principles of Marketing

Phil 3305—Medical Ethics (in preparation)

CVM 3100—Perspectives: Interrelationships of People and Animals in Society Today

Science, Technology, and Society

Science and technology influence every aspect of modern society and are in turn structured by social, political, and economic forces. Courses in this cluster draw attention to some of these complex interactions.

AnPl 3010—Environment and World Food Production (in preparation)
Biol 1101—Heredity and Human Society
Biol 3051—Biology and the Future of the Earth
CSci 3001—Perspectives on Computers and Society
EEB 3001—Introduction to Ecology
Geog 3355—Environmental Problems
Nurs 3690/5690—Life Span Growth and Development I
Nurs 3691/5691—Life Span Growth and Development II
Phil 3305—Medical Ethics (in preparation)
Phys 1003—The Changing Physical World
WoSt 3022—Biology of Women (in preparation)

Cultural Diversity in the United States

Our society has become aware of the need for all its members to appreciate the diversity within our culture. Courses in this cluster will enable you to better appreciate the cultural diversity of the United States.

AmSt 1003—American Cultures (in preparation)
Engl 1591—Literature of American Minorities
FSoS 5500—Racial and Ethnic Diversity in Families
GC 1816—Afro-American Literature
Geog 3101—Geography of the United States and Canada
Hist 1305—Cultural Pluralism in American History
Hist 3812—Civil War and Reconstruction
Hist 3910—A Century of American Immigration: 1884-1984
WS 1990—Northern Minnesota Women: Myths and Realities

Cultural Diversity in the Post-Colonial World

Courses in this cluster will enable you to better appreciate the cultural diversity of modern societies in other countries. Students who want to enhance their understanding of cultural diversity should also consider studying a foreign language. (Independent Study offers courses in Danish, French, German, Italian, Norwegian, Russian, Spanish, and Swedish.)

Afro 3601—Introduction to African Literature
Geog 3121—Geography of Latin America
Geog 3183—Russia and Environs
Hist 1013—Introduction to World History III (in preparation)
WoSt 3910—Women Between Victorianism and Emancipation

Health and Human Services

This cluster is designed for students who are planning—or have already started—a career in Health and Human Services.

Anth 1102—Introduction to Social and Cultural Anthropology
Anth 5141—Culture and Personality
CPsy 1301—Introductory Child Psychology
CPsy 3302—Infancy
CPsy 3304—Introduction to Maturity and Aging
CPsy 5303—Adolescent Psychology
CPsy 5331—Processes of Social Development
EPsy 5400—Counseling Psychology: Career Development and Planning
FSoS 5001—Human Sexual Behavior
FSoS 5200—Family Systems
FSoS 5240—Violence in the Family
FSoS 5240—American Families in Transition
GC 1722—Home Life: Parent-Child Relationships
Nurs 3690/5690—Life Span Growth and Development I
Nurs 3691/5691—Life Span Growth and Development II
Psy 1001—Introduction to Psychology
Psy 3101—Introduction to Personality
Psy 3604—Introduction to Abnormal Psychology
Psy 3970—Stress Management
PubH 5609—Toward an Understanding of Child Sexual Abuse
PubH 5642—Child Abuse and Neglect
Soc 5201—Introduction to Social Psychology
SW 1001—Introduction to American Social Welfare and Community Services
SW 5010—Toward an Understanding of Child Sexual Abuse

Parents, Children, and Teenagers

Perhaps nothing has changed more in our society over the last two decades than the family. Courses in this cluster respond to the desire and the need of parents, young adults, teachers, counselors, therapists, and policy planners to better understand the dynamics of the modern family.

CPsy 1301—Introductory Child Psychology
CPsy 3302—Infancy
CPsy 5303—Adolescent Psychology
CPsy 5331—Processes of Social Development
FSoS 5001—Human Sexual Behavior
FSoS 5200—Family Systems
FSoS 5240—Violence in the Family
FSoS 5240—American Families in Transition
FSoS 5500—Racial and Ethnic Diversity in Families
GC 1283—Psychology of Human Development
GC 1284—Behavior Problems of Children
GC 1722—Home Life: Parent-Child Relationships
PubH 5609/SW 5010—Toward an Understanding of Child Sexual Abuse
Pub 5642—Child Abuse and Neglect

The Master Teacher

This program cluster includes several courses that can be counted toward a Master of Education degree at the University of Minnesota. Consult the current College of Education bulletin to determine which courses might be appropriate for your career objectives. (If you are interested in applying for the Master Teacher Program in Extension Classes, which is not a program cluster, call CEE Counseling, 612-625-2500.)

CISy 5201—Systems Approach to Design of Instruction (in preparation)
CPsy 5303—Adolescent Psychology
CPsy 5331—Processes of Social Development
Educ 5660—Creating Social Studies Curriculum (in preparation)
EdPA 5099—Inventing the Future—Living, Learning, and Working in the 1990s
EdPA 5110—Personal Time Management and Effective Administration
Elem 5321—Second Language Programs for Young Children: Like Child's Play
EPsy 5112—Knowing, Learning, Thinking
EPsy 5114—Psychology of Student Learning (in preparation)
EPsy 5400—Counseling Psychology: Career Development and Planning
EPsy 5690—Education of the Gifted and Talented

Management, Business, and Industry

About 20 percent of the people who enroll in Independent Study want to become more proficient in this area. If you are among them, then this program cluster is designed to serve your needs and interests.

Acct 1050—Introduction to Financial Reporting (in preparation)
Acct 3001—Introduction to Management Accounting
Acct 5135—Income Tax Accounting
BGS 3002—Business and Society: Ethics and Stakeholder Management
BGS 3004—International Business
BLaw 3058—Introduction to Law, and the Law of Contracts and Sales Contracts
BLaw 3078—Agency, Partnerships, Corporations and Commercial Paper
BLaw 3088—Law of Personal Property, Real Property, Wills, and Estates
BFin 3000—Finance Fundamentals
Comp 1031—Introduction to Technical and Business Communication
Comp 3022—Critical Reading and Writing for Management
Comp 3032—Preprofessional Writing for Business
Econ 1101—Principles of Microeconomics
Econ 1102—Principles of Macroeconomics
Econ 3102—Macroeconomic Theory
Econ 3701/5721—Money and Banking
GC 1511—Introduction to Modern Business
GC 1540—Accounting Fundamentals I
GC 1542—Accounting Fundamentals II
GC 1551—Marketing: Introduction
GC 1553—Marketing: Principles of Management
IDSc 1010—Fundamentals of Information Development and Use (in preparation)
IR 0001—Supervision I: Elements of Supervision
IR 3000—Teaching Labor Relations in the Schools
IR 3007—Collective Bargaining and Labor Relations
Mgmt 3001—Fundamentals of Management
Mgmt 3002—Psychology of Management
Mgmt 3004—Business Policy: Strategy Formulation and Implementation
Mgmt 3008—Entrepreneurship and the Smaller Enterprise
Mktg 3000—Principles of Marketing

Technology-Assisted Courses

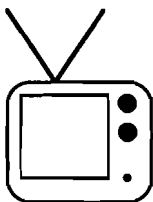


For people who like to learn in different ways, Independent Study offers several kinds of technology-assisted courses. These include television courses and courses that use videocassettes, audiocassettes, or computer disks.

Like other Independent Study courses, technology-assisted courses include a course study guide and texts. The study guide integrates all of the course components—it details the reading assignments, gives the viewing, listening, or computer instructions, and contains study notes, written assignments, and/or exam information.

Our television courses are offered with the cooperation of University Media Resources and public television stations, and are broadcast during fall, winter, and spring quarter of the academic year. The television courses are also available with videocassettes. The broadcast schedule for this year's television courses is given below. Information about our audio-assisted, video-assisted, and computer-assisted courses is given on the next pages.

Television Courses



The television courses we offer are listed below according to University quarter. Although television broadcasts take only 10 weeks, students may take up to one year from the date of registration to complete the course requirements. Descriptions and costs of these courses can be found in the *Course Descriptions* section of this bulletin, arranged alphabetically by department. **The 5xxx-level television courses may be available for graduate credit.** Graduate School approval was pending for some courses at the time this bulletin was printed. Call 612-624-4393 for current information. If you register for graduate credit, pay the higher tuition.

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 TV Program

You can go to the following University of Minnesota locations to view a videocassette of a program. Please call ahead to check on cassette availability and open hours.

Twin Cities

Learning Resources Center
15 Walter Library
Minneapolis campus
612-624-1584

Morris

Morris Regional Advising Center
232 Community Services Building
Morris campus
612-589-2211, ext. 6456

Duluth

Multi-Media Services Center
248 Library
Duluth campus
218-726-6121

Rochester

Rochester CEE Center
855 30th Avenue SE
Rochester, MN
507-280-2828; 1-800-947-0117

Fall 1993

Registration dates: August 30—October 29, 1993

Special note: If quarter of registration is important because of financial aid, be sure to register according to the dates specified in the University's academic calendar, given on page 5.

Second Language Programs for Young Children: Like Child's Play, Elem 5321*

KTCI: Tuesdays, 9—9:30 p.m., Sept. 28—Nov. 30
(repeats) Thursdays, 9—9:30 p.m., Sept. 30—Dec. 2
KWCM: Tuesdays, 7—7:30 a.m., Sept. 28—Nov. 30
KSMQ: Wednesdays, 5:30—6 p.m., Sept. 29—Dec. 1
(repeats) Thursdays, 2—2:30 p.m., Sept. 30—Dec. 2
WDSE: Wednesdays, 6:15—6:45 a.m., Sept. 15—Nov. 17
(repeats) Saturdays, 7:30—8 a.m., Sept. 18—Nov. 20

* Graduate credit available.

Introduction to the Visual Arts, Arth 1001

KTCI: Tuesdays, 9:30—10 p.m., Sept. 28—Nov. 30
(repeats) Thursdays, 9:30—10 p.m., Sept. 30—Dec. 2
KWCM: Thursdays, 7—7:30 a.m., Sept. 30—Dec. 2

Winter 1994

Registration dates: Dec. 6, 1993—Feb. 28, 1994

Special notes: If you are registering for a course broadcast in Duluth, you may register starting November 15. If quarter of registration is important because of financial aid, be sure to register according to the dates specified in the University's academic calendar, given on page 5.

Inventing the Future: Living, Learning, and Working in the 1990s, EdPA 5099*

KTCI: Tuesdays, 9:30—10 p.m., Jan. 4—March 8

(repeats) Thursdays, 9:30—10 p.m., Jan. 6—March 10

KWCM: Thursdays, 7—7:30 a.m., Jan. 6—March 10

KSMQ: Wednesdays, 5:30—6 p.m., Jan. 5—March 9

(repeats) Thursdays, 2—2:30 p.m., Jan. 6—March 10

WDSE: Wednesdays, 6:15—6:45 a.m., Dec. 1—Feb. 2

(repeats) Saturdays, 7:30—8 a.m., Dec. 4—Feb. 5

*Graduate credit available

Geography of Minnesota, Geog 3111

KTCI: Tuesdays, 9—9:30 p.m., Jan. 4—March 8

(repeats) Thursdays, 9—9:30 p.m., Jan. 6—March 10

KWCM: Tuesdays, 7—7:30 a.m., Jan. 4—March 8

Spring 1994

Registration dates: March 1—April 29, 1994

Special notes: If you are registering for a course broadcast in Duluth, you may register starting February 21. If quarter of registration is important because of financial aid, be sure to register according to the dates specified in the University's academic calendar, given on page 5.

Education of the Gifted and Talented, EPsy 5609*

KTCI: Tuesdays, 9:30—10 pm, March 29—May 31

(repeats) Thursdays, 9:30—10 pm, Mar. 31—June 2

KWCM: Thursdays, 7—7:30 a.m., Mar. 31—June 2

KSMQ: Wednesdays, 5:30—6 p.m., March 30—June 1

(repeats) Thursdays, 2—2:30 p.m., Mar. 31—June 2

WDSE: Wednesdays, 6:15—6:45 a.m., March 9—May 11

(repeats) Saturdays, 7:30—8 a.m., March 12—May 14

Toward an Understanding of Child Sexual Abuse, PubH 5609/SW 5010***

KTCI: Tuesdays, 9—9:30 p.m., March 29—May 31

(repeats) Thursdays, 9—9:30 p.m., March 31—June 2

KWCM: Tuesdays, 7—7:30 a.m., March 29—May 31

*May be available for graduate credit

**Graduate credit available

Audio-Assisted Courses



Many Independent Study courses use audiocassettes as part of the course learning materials. These courses are currently offered in more than 20 departments. Some audio-assisted courses were originally radio courses broadcast over the University's public radio station, KUOM; other courses (in foreign languages or music) use taped exercises. You can purchase audiocassettes from Independent Study when you register and order your course materials, or you can listen to them at the Learning Resources Center, 15 Walter Library, Minneapolis campus. This center has copies of most Independent Study audiocassettes. You can either listen to the audiocassettes there or make copies of them (using your own blank tapes).

See the *Course Descriptions* section of this bulletin under the following department headings for more information about specific audio-assisted courses.

Afro-American and African Studies	Horticulture
American Studies	Institute of Languages and Literatures
Biology	Russian
Classical and Near Eastern Studies	Jewish Studies
Greek	Journalism
Latin	Music
Cultural Studies and Comparative Literature	Nursing
Design	Scandinavian Languages and Literature
English	Danish
Literature	Norwegian
Creative and Professional Writing	Swedish
Family Studies	Spanish and Portuguese
French and Italian	Theatre
German	Veterinary Medicine
History	Women's Studies

Video-Assisted Courses

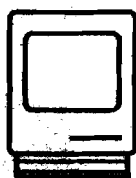


The following courses use one or more videocassettes, which you can rent to view at home or watch at one of the University's learning centers (see *If You Miss a TV Program*, above, and *Video-Assisted Courses* in the *General Information* section). For information about these courses, check the *Course Descriptions* section of this bulletin.

Anth 1102, Introduction to Social and Cultural Anthropology
Arch 5956/AmSt 3920/AmSt 5920, The Meanings of Place
Arth 1001, Introduction to the Visual Arts
Comp 1031, Introduction to Business and Technical Communication
CISy 5201, A Systems Approach to Instructional Design
EdPA 5099, Inventing the Future
Elem 5321, Second Language Programs for Young Children: Like Child's Play
EPsy 5400, Career Development and Planning
EPsy 5690, Education of the Gifted and Talented
Engl 3410, Voices and Visions in American Poetry
Engl 3851, The English Language
FSoS 5200, Family Systems
GC 1551, Marketing: Introduction
Geog 3111, Geography of Minnesota
Hist 3822, The United States in the 20th Century: 1932-1960
Hist 3841, American Business History
JwSt 3034/RelS 3034, Introduction to Judaism
Ling 1001, Nature of Human Language

Math 1211, Calculus I
 Nurs 3690/5690, Life Span Growth and Development I
 Nurs 3691/5691, Life Span Growth and Development II
 Phys 1003, The Changing Physical World
 Pol 1041, Contemporary Political Ideologies
 PubH 5609/SW 5010, Toward an Understanding of Child Sexual Abuse
 PubH 5642, Child Abuse and Neglect
 Span 1101-1102-1103, Beginning Spanish I, II, III
 Th 1101, Introduction to the Theatre

Computer-Assisted Courses



Independent Study now offers several courses that use computer instructional software. The software programs provide students with an opportunity for an interactive learning experience. Some programs are designed for Macintoshes, others for IBM, and still others are available for both. You will find detailed information about these courses in the *Course Descriptions* section, where they are marked with a computer symbol.

Biol 1101, Heredity and Human Society; requires Macintosh (in preparation)
 Comp 3014, Writing in the Social Sciences; requires Macintosh
 Comp 3031, Technical Writing for Engineers; requires Macintosh
 GC 0625, Intermediate Algebra, Part I; requires Macintosh (in preparation)
 GC 1571, Introduction to Microcomputer Applications; requires IBM
 GC 1572, Introduction to Computer Programming; requires IBM with BASIC interpreter
 Russ 1101, 1102, 1103, Beginning Russian I, II, III; optional use of IBM or Macintosh
 High School English, Basic Strategies for Writing; requires Macintosh

The authors of some courses recommend software packages that you can purchase or order through your local computer software store or bookstore. We bring these packages to your attention as suggestions. If you enjoy working with computers and are interested in enhancing your understanding of a subject area, you might want to take one of the following courses and purchase the recommended software.

GC 1540 and 1542, Accounting Fundamentals I and II. *Principles of Accounting*; requires Macintosh; Houghton Mifflin.
 GC 1161, Physical Science: Solar System Astronomy. *Dance of the Planets*; requires IBM; Science Simulations Software.
 GC 1162, Physical Science: Stellar Astronomy. *EZ Cosmos*; requires IBM; Future Trends Software.
 Norwegian 1101, 1102, 1103. Beginning Norwegian I, II, III. *MacNorsk*; requires Macintosh; available from Louis Janus; 5136 Sheridan Ave. S., Minneapolis MN 55410.
 Span 1101, 1102, 1103, Beginning Spanish I, II, III. Information concerning the software program is available in the required textbook.

If you do not own a personal computer or have access to one, you can work at one of the University's computer labs. You may have to purchase a computer lab card. They are available at the following offices. On the Twin Cities campus, the lab cards are valid for one academic quarter only.

- Twin Cities—East Bank, Minneapolis campus, Bursar's Office, 145 Williamson Hall
- Twin Cities—West Bank, Minneapolis campus, Cashier, 101a Anderson Hall
- Twin Cities—Saint Paul campus, Cashier, 107 Coffey Hall
- Duluth—Cashier Windows, Darland Administration Building
- Morris—call Computing Services at 612-589-6390
- Rochester—call the Continuing Education Center at 1-800-947-0117

Find the lab most convenient for you in the list below. Call the lab first to find out its hours and the type of equipment (IBM or Macintosh) available.

Computer Labs

Minneapolis campus, East Bank

148 Arch, 624-9583
54 EddyH Annex, 625-0314
3-116 EE/CSci, 624-8885
4-204 EE/CSci, 625-9081
121 EltH, 624-0866
14 FolH, 625-4896
26 LindH, 626-0856
308 MechE, 625-7352
8-425 MoosT, 625-1477
1 NichH, 625-5082
130 Phys, 625-6820
9 WaLib, 626-1899

Minneapolis campus, West Bank

170 AndH, 624-6528
250 AndH, 6246526
455 BlegH, 626-7778
B2 OMWL, 626-2205

St. Paul campus

B50 CEntLib, 624-3269
135 ClaOff, 624-9226
305 McNH, 624-5367
436 VetS, 624-4281

Duluth campus

120 BohH, 726-7858
470H, 726-6238
87 LSH, 726-6227
165 L*, 726-6549
239 MonH, 726-8970
45 SBE, 726-7700
* has special equipment for the disabled

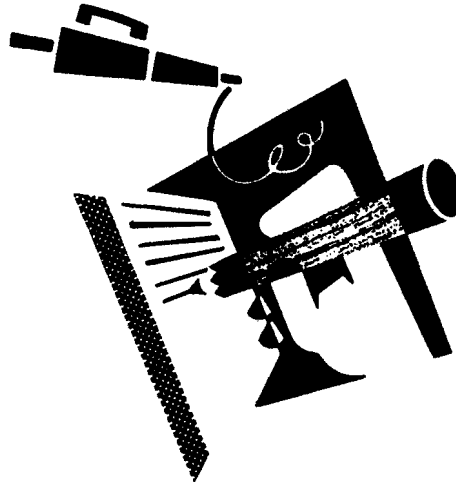
Morris campus

Basement Behm*
Ground floor Behm*
114 Cam*
Basement MRC*
Basement ORL*
3rd floor RBLib*
127 SC*
*call 589-6390 for all labs

Rochester campus

Continuing Education Center
855 30th Avenue SE
Rochester, Minnesota
280-2828; 1-800-947-0117

High School Program



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 who wants to study for personal satisfaction.

With the approval of high 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 school board only. **Students expecting to use credits earned through Independent Study to meet graduation requirements must obtain permission from school authorities before enrolling.**

Adults 19 years old 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, 550 Cedar St., St. Paul, MN 55101; 612-296-4057.

Admission

Independent Study courses are open to anyone who can benefit from them. High school credits are awarded, however, only in cooperation with 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.**

College Courses Through Independent Study

Also see *Post-Secondary Enrollment Options Act*

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 credits is, of course, a function of the college the student enters. See the *Course Descriptions* section of this bulletin for a complete listing 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 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 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. Independent Study offers courses in a wide range of subjects designed to meet individual needs. If you want to continue your education through Independent Study courses, see the other sections of this bulletin.

Post-Secondary Enrollments Options Act

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 the student's high school counselor to complete the PSEOA notice of registration form;
2. submitting a high school transcript;
3. completing an Independent Study registration form; and
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
201 Wesbrook Hall
77 Pleasant St. SE
Minneapolis, MN 55455
612-626-1666

Credits

Independent Study courses satisfy University of Minnesota entrance requirements and may be accepted by 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.*)

Faculty

The instructor for each course is listed with the course description. More information on each faculty member is given following the subject area divisions under *Courses* (see below).

Grades

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 (see the *General Information* section, *Transcripts and Records*).

How to Enroll

If you plan to apply Independent Study credits toward high school graduation, obtain permission from your high school district authorities. If you would like to know more about a course before enrolling, write to Independent Study for an introduction to the course. The introduction will give you an outline of the course content and work.

Complete a registration form, and send it with full or partial payment tuition (see *Tuition and Fees; Partial Payment Plan*, below). You are encouraged to order your texts/supplies for a course at the time you register. For information on ordering texts/supplies at the time you register, see the *General Information* section, *Textbooks and Supplies; Postage*.

Send your registration form and payment to the Department of Independent Study, University of Minnesota, 45 Wesbrook Hall, 77 Pleasant St. SE, Minneapolis, MN 55455. Remittances should be by check, money order, credit card, or authorization for payment from your school district. Checks or money orders should be payable to the University of Minnesota.

Other Information

In addition to reading this section of the bulletin, refer to the *General Information* section for details on the following:

Cancellations
Course Completion
Examinations
Postage
Reenrollment
Reinstatements
Taxable Items
Textbooks and Supplies

Partial Payment Plan

Under the partial payment plan, one-third of the total tuition, plus a service charge of \$8 per course, is paid at the time of registration. The remaining two-thirds is payable in two equal payments due 30 days and 60 days after the date of registration. This plan does not apply to tuition paid by credit card. The payment schedule (including the \$8 service charge) is given below.

Tuition	1st payment	2nd payment	3rd payment
\$40 (quarter credit)	\$21	\$13.50	\$13.50
\$80 (semester credit)	\$34	\$27	\$27

Assignments will be accepted only through that third of the course for which tuition has been paid. For example, a student who enrolls in a 12-assignment course will not receive instruction beyond assignment 4 if he or she has only made the first payment. A course grade will not be issued until all payments are received and processed.

On the registration form, check the box labeled Partial Payment, fill in the first payment on the line labeled Tuition, fill in the service charge, and any charge for texts and other materials (if you order them by mail). Send the registration form and your payment to Independent Study. Texts and other materials ordered by mail through Independent Study must be paid in full at the time of registration.

Payment due notices will be sent to remind you of the remaining installments. Registration will be canceled if total tuition has not been paid within 90 days of the original registration date. Once registration has been canceled, you may continue the course only by reenrolling.

Tuition and Fees

Also see *How to Enroll*.

Tuition is \$40 per quarter credit and \$80 per semester credit (tuition is subject to change without notice). Refer to the *Course Descriptions* section for information on college tuition.

Either you or your 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. Complete the section on the registration form labeled Bill to Department/Company.

Business

Margaret K. Lydell, M.A., Instructor, Continuing Education and Extension, University of Minnesota

Gary K. Seiler, B.S., Instructor, Continuing Education and Extension, University of Minnesota

Gary G. Strom, M.S., Business Instructor, Minneapolis Technical College

Accounting, Part A (9813)

semester credit—11 assignments—2 exams—text price \$50—Strom

A simple accounting cycle for a small service business is worked out in 11 lessons and two application projects. Students use debits, credits, balance sheets, general journals, ledgers, cash journals, work sheets, and income statements. This course gives students some of the basics of accounting.

General Business, Part A (9823)

semester credit—10 assignments—2 exams—text price \$28—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: 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)

semester credit—10 assignments—2 exams—text price \$28—Seiler

A continuation of Part A, with emphasis on the role of the consumer in our economic system. Topics: money management; the art of spending; consumer protection; consumer credit; making money payments; building financial security; and insurance.

Shorthand, Part A (9901)

semester credit—18 assignments—2 exams—text price \$41—Lydell

An introduction to basic business shorthand, including the alphabet, brief forms, and the theory of Gregg Simplified Shorthand. After completing this course, a student should be able to take dictation at 60 words per minute.

English

Margaret Anderson, M. A., English Instructor, Totino-Grace High School

Mary Ellen Briel, M. A., English and French Instructor, Totino-Grace High School

Melvin A. Hoke, M.A., English Instructor, Minneapolis Public Schools

Ninth Grade English, Part A (9831)

semester credit—10 assignments—1 exam—text price \$47—Hoke

A review of short story elements, emphasizing plot, character, setting, point of view, theme and unity; an introduction to the epic, focusing on themes and patterns in Homer's *Odyssey*; course concludes with an open-book final exam project (making up your own story).

Ninth Grade English, Part B (9832)

semester credit—10 assignments—1 exam—text price \$47—Hoke

This course includes reading and writing about poetry, nonfiction (such as biography and articles), and drama (*Romeo and Juliet*); course concludes with an open-book final exam project (report on a novel of the student's choice).

Tenth Grade English, Part A (9833)

semester credit—10 assignments—1 exam—text price \$50—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.

New courses and those that require the use of a computer are marked with icons:

NEW



Tenth Grade English, Part B (9834)

semester credit—10 assignments—1 exam—text price \$49—Hoke

A continuation of Part A.

Eleventh Grade English, Part A (9835)

semester credit—9 assignments—1 exam—text price \$51—Hoke

An interdisciplinary approach to language and literature through a study of American literature from its beginnings through the 19th century. Readings include selections from Jefferson, Crèvecoeur, de Tocqueville, Emerson, Thoreau, Whitman, Poe, Hawthorne, Harte, Twain, James, and Crane. Modern 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)

semester credit—9 assignments—1 exam—text price \$51—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)

semester credit—10 assignments—1 exam—text price \$46—Hoke

A thematic approach to the study of Western literature. 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)

semester credit—10 assignments—1 exam—text price \$51—Hoke

A continuation of Part A. Topics explored are appearance versus reality, protest against injustice, and the search for meaning in life. Students explore these topics in the works of Ibsen, Kafka, Auden, Lawrence, Swift, Mansfield, Zola, Conrad, Joyce, and others.

Straight Thinking (9839)

quarter credit—6 assignments—1 exam—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 exam is optional. Independent Study will furnish one blank audiocassette to students who have access to a recorder.

Youth in Conflict (9840)

quarter credit—6 assignments—1 exam—text price \$18—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. Independent Study will furnish one blank audiocassette to students who have access to a recorder.

Meaning and Self-Discovery in Literature (9841)

quarter credit—6 assignments—1 exam—text price \$25—Hoke

In examining the viewpoints 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 exam is optional. Independent Study will furnish one blank audiocassette to students who have access to a recorder.

Practical Writing (9842)

quarter credit—6 assignments—1 exam—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)

semester credit—12 assignments—no exams—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)

semester credit—10 assignments—no exams—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, and 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.

Contemporary Literature/Contemporary Problems (9843)

semester credit—8 assignments—1 exam—text price \$51—Hoke

A presentation of literature with a view to understanding contemporary problems, this course permits students to gain insight into the problems of Indians, blacks, women, ecology, and the future.

The Black American Experience (9924)

semester credit—10 assignments—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 (9846)

semester credit—10 assignments—1 exam—text price \$48—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 needs a

bride, black people reaching for wealth, and contemporary alienation.

Basic Strategies for Writing (9850)

semester credit—10 assignments—no exams—text and computer software \$47—Anderson/Briel

NEW



This course is divided into five units, each of which consists of two lessons. The first lesson of each unit leads students through prewriting activities to help them form a starting place and to direct them through the organization of the first draft. The second lesson of each unit focuses on revision. Students write five types of essays: personal narratives, descriptive essays, character sketches, persuasive essays, and compare/contrast essays. The course is done entirely on WAC® computer software, obtainable from Independent Study upon registration. **This course is now in preparation; please inquire before enrolling.**

Languages

College-level foreign language courses are available in the following languages. For information on these courses, see the college *Course Descriptions* section.

Danish
French
German
Greek (Classical)
Italian
Latin
Norwegian
Russian
Spanish
Swedish

For more information about a course, call or write for a free copy of the study guide introduction.

Dee Buth, M.A., German Teacher, Blaine High School
Adele Donchenko, Ph.D., Associate Professor, Russian and East European Studies, College of Liberal Arts, University of Minnesota
Sue Sorheim, M.A., German Instructor, North Hennepin Community College

For more information about a course, call (612-624-0000; 1-800-234-6564) or write for a free copy of the study guide introduction.

Beginning Russian, Part A (9961)

semester credit—10 assignments—2 exams—text price \$22—3 audiocassettes \$9—Donchenko

Reading, writing, translation, and grammar of the Russian language.

Beginning Russian, Part B (9962)

semester credit—10 assignments—2 exams—text price \$22—3 audiocassettes \$9—Donchenko

Continuation of Part A. (Prerequisite: Beginning Russian, Part A, or equivalent)

Beginning German, Part A (9963)

semester credit—10 assignments—2 exams—text price \$48—8 audiocassettes \$21.50—Buth and Sorheim

This is the course for you if German is not offered in your high school. Discover for yourself how easily you can ask and answer basic questions about yourself, your friends and family, count, and tell time in German. Using the study guide, text, and tapes, you can complete the equivalent of the first half year of German.

Beginning German, Part B (9964)

semester credit—9 assignments—2 exams—Buth and Sorheim

A continuation of Part A. (Prerequisite: Beginning German, Part A, or equivalent) **This course is now in preparation; please inquire before enrolling.**

Mathematics

David L. Ekstrand, M.A., Mathematics Professor, St. Thomas Academy, St. Paul

John W. Walther, M.Ed., Math Instructor, South High School, Minneapolis

Elementary Algebra, Part A (9892)

semester credit—12 assignments—2 exams—text price \$45—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 (9893)

semester credit—12 assignments—2 exams—text price \$45—Ekstrand

A continuation of Part A. (Prerequisite: Elementary Algebra, Part A, or equivalent)

Plane Geometry, Part A (9887)

semester credit—13 assignments—2 exams—text price \$46—Walther

A basic course in high school geometry. 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 (9888)

semester credit—13 assignments—2 exams—text price \$46—Walther

A continuation of 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)

Higher Algebra, Part A (9885)

semester credit—10 assignments—2 exams—text price \$48—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 want 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)

semester credit—10 assignments—2 exams—text price \$48—Ekstrand

A continuation of Part A. 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)

Science

*Kenneth Jeddloh, Ph.D., Science Teacher,
Minneapolis Public Schools*
*Eric Mischo, B.S., Teaching Specialist,
Independent Study*

Biology, Part A (9801)

semester credit—10 assignments—1 exam—text price \$49—Jeddloh

Topics include the cell, basic biological processes, and comparative anatomy and physiology as they relate to evolution and human biology.

Biology, Part B (9802)

semester credit—10 assignments—1 exam—text price \$49—Jeddloh

A continuation of Part A. General topics include human inheritance, embryology, and evolution; viruses, molds, yeasts, and bacteria and their importance to humans; and green plants and their functions. (Prerequisite: Biology, Part A, or one semester of high school biology)

Physics, Part A (9909)

semester credit—9 assignments—4 exams—text price \$35—Mischo

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 assignment problems and in 10 experiments. The experiments can be performed using materials found in most home, e.g., a watch or other timer, a measuring device, C clamps, pennies, string, quart jars. (Prerequi-

sites: high school algebra, geometry, and advanced algebra or trigonometry)

Physics, Part B (9910)

semester credit—6 assignments—3 exams—text price \$35—lab materials \$28—Mischo

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 seven experiments require materials that can be purchased at electronics or hobby stores. (Prerequisites: high school algebra, geometry, and advanced algebra or trigonometry)

Social Studies

*Kathleen Arola, M.A., Lecturer, Psychology,
Continuing Education and Extension*
*Bruce H. Jasper, B.A., B.S., Social Studies
Instructor, Hosterman Junior High School,
New Hope, Minnesota*
*Fred A. Johnson, Ph.D., J.D., Associate
Professor, General College, University of
Minnesota*
*Melvin A. Hoke, M.A., English Instructor,
Minneapolis Public Schools*

Problems of American Democracy, Part A (9911)

semester credit—12 assignments—2 exams—text price \$53—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. Topics 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)

semester credit—12 assignments—2 exams—text price \$52—Johnson

This course is the equivalent of the second half of 12th grade social studies. Topics include principles and practices of government, the political processes, national government, financing government, and the United States and world affairs.

Minnesota high school students may be eligible for college enrollment under the Post-Secondary Enrollment Options Act. See pages 98-99 for information.

American History, Part A (9922)

semester credit—12 assignments—2 exams—text price \$39—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)

semester credit—12 assignments—2 exams—text price \$46—Jasper

A continuation of Part A, this course covers the history of the period following Reconstruction through the 1970s.

General Psychology, Part A (9941)

semester credit—10 assignments—1 exam—text price \$43—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 include sensation, perception, learning, motivation, and behavior.

General Psychology, Part B (9942)

semester credit—10 assignments—1 exam—text price \$43—Hoke

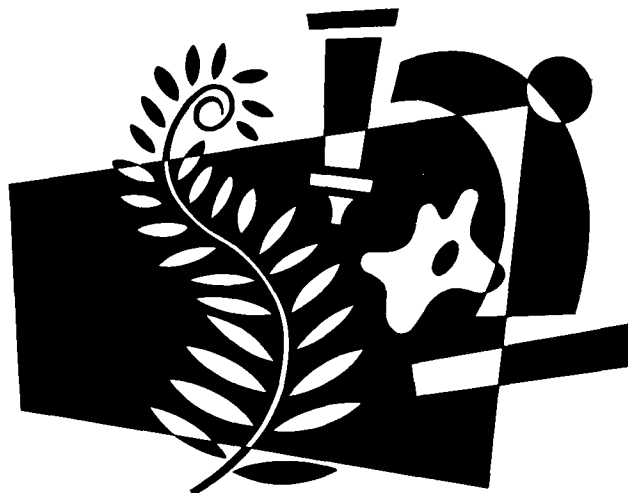
A continuation of Part A. Topics include verbal behavior, cognitive processes, frustration and conflict, individual differences, personality, behavior pathology, social psychology, and foundations of behavior. (Prerequisite: General Psychology, Part A)

Project Self-Discovery (9943)

semester credit—10 assignments—no exams—no required text—Arola

Through introspective 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.

CEE Certificate Programs



Continuing Education and Extension (CEE) 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, and are not transferable to a degree program. Degree credit courses may be used toward both degrees and certificates.

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 a certificate in seeking new employment or possible promotional opportunities. With careful planning, some certificates can be a stepping-stone to a degree program. If a degree is your goal, contact CEE Counseling (612-625-2500) for assistance. Work on most certificates may be done through a combination of Independent Study, Extension Classes, day school classes, or summer session classes.

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 on approval, although a minimum of 25 percent of the credits required for any certificate must be earned through the University of Minnesota, Twin Cities campus. The residency requirement cannot be met by repeating courses at the University of Minnesota 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 certificate programs at one time. Students interested in taking courses toward certificate programs on the S-N grading system should first consult an adviser at 612-625-2500.

Application—Students can obtain a copy of Certificate Program Information, with an application form, by contacting CEE Counseling, 612-625-2500, 314 Nolte Center. A nonrefundable \$20 application fee (Visa and MasterCard accepted) 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.

Admission criteria vary among certificate programs. Admission decisions are based on previous college performance (a better than 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 who expects to receive a certificate must file a Certificate Completion form when registering for his or her last course. A \$20 nonrefundable certificate fee (Visa and MasterCard accepted) is required at the time the Certificate Completion form is filed. There is a quarterly deadline for filing this form. When a student completes a specified program with at least a C (2.00) 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. Certificates are dated and awarded each quarter of the academic year.

All CEE 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 guarantee admission into a college's honors program.

For information about certificate programs, including transfer of credits, contact CEE Counseling, University of Minnesota, 314 Nolte Center, 315 Pillsbury Drive SE, 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 (*).

The Liberal Arts Certificate can be earned entirely through Independent Study. The other certificates can be partially completed through Independent Study, but require additional credits from day school classes, Extension Classes, or approved transfer credits.

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 Requirements (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 CEE Counseling, University of Minnesota, 314 Nolte Center, 315 Pillsbury Dr. SE, Minneapolis, MN 55455; 612-625-2500.

**Science and
Quantitative Methods
Certificate (45 credits)**

This certificate is designed to provide students with a basic foundation of knowledge in sciences and quantitative methods. Through careful course selection, this certificate can be adapted to suit the needs of students seeking a variety of majors. It is particularly appropriate for those who want to pursue advanced study in health, agricultural, or general sciences or for students who may, for personal or professional reasons, wish to enhance their quantitative skills. All courses carry college credit and are applicable to a baccalaureate degree in CLA, CBS, Agriculture, and all of the pre-health science areas at the University of Minnesota. This certificate may also address the needs of students already holding baccalaureate degrees but lacking the necessary science component for admission to Medical School, the Ophthalmology Technician Certificate, or the Cardiovascular Perfusion Technology Certificate.

A minimum of 50 percent of all course work must be taken on the A-F grading system. Students transferring credits to this program from other accredited institutions must take a minimum of 12 credits at the University of Minnesota. Early planning with a CEE adviser is strongly encouraged to assure that coursework will satisfy requirements for completion of the program.

Core requirements: (21-25 credits)

Comp 1011*: 5 credits

Natural and Physical Sciences: 8-10 credits

Quantitative Methods: 8-10 credits

Electives to make a minimum of 45 credits, selected from the following areas:

Astronomy	Geology and Geophysics
Biology	Health Science Unit courses
Biochemistry	History of Medicine
Biostatistics	History of Science
Cell Biology and Neuroanatomy	Information and Decision Sciences
Chemistry	Kinesiology
Composition*	Logic
Ecology, Evolution, and Behavior	Mathematics
Food Science and Nutrition	Medical Terminology courses
Genetics and Cell Biology	Microbiology

Operations Management Sciences	Rhetoric* (courses in technical writing and speech only)
Physics	Scientific Reasoning
Physiology	Speech*
Plant Biology	Statistics (and Social Science statistics courses)
Psychology*	Veterinary Pathobiology
Public Health*	

*Related coursework from these departments may be applied to the certificate, but must be preapproved by the certificate adviser.

Additional science courses that apply toward a degree plan may also be acceptable (consult with a CEE adviser, 612-625-2500).

Undergraduate Development Certificates in Accounting

The accounting certificates can be of value to individuals in some 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 corporate 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 the last 90 credits.

Note—Upper division (3xxx- or 5xxx-level) management courses 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 (60-64 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

- Acct 1050 (formerly 1024-1025)—Introduction to Financial Reporting*
- Acct 3001—Introduction to Management Accounting*
- Acct 3101—Intermediate Financial Reporting
- Acct 5102—Advanced Financial Reporting I
- Acct 3201—Intermediate Management Accounting
- Comp 1011—Writing Practice I*
- Comp 3022—Critical Reading and Writing for Management*
- Econ 1101, 1102—Principles of Microeconomics and Macroeconomics*
- IDSc 1010—Fundamentals of Information Development and Use*
- IDSc 3030—Information Systems and Information Management

Math 1111—College Algebra and Analytic Geometry*
 Math 1142—Short Calculus* or Math 1251—One-Variable Differential and Integral Calculus I*
 OMS 1020—Data Analysis and Statistical Inference for Managers

Level II (88-92 credits)

Students transferring credits to this program from other accredited institutions must take a minimum of 24 credits in accounting at the University.

Core Requirements (77-80 credits)

Acct 1050 (formerly 1024-1025)—Introduction to Financial Reporting*
 Acct 3001—Introduction to Management Accounting*
 Acct 3101—Intermediate Financial Reporting
 Acct 5102—Advanced Financial Reporting I
 Acct 3201—Intermediate Management Accounting
 Comp 1011—Writing Practice I*
 Comp 3022—Critical Reading and Writing for Management*
 Econ 1101, 1102—Principles of Microeconomics and Macroeconomics*
 IR 3002—Personnel and Industrial Relations
 IDSc 1010—Fundamentals of Information Development and Use*
 IDSc 3030—Information Systems and Information Management
 Math 1111—College Algebra and Analytic Geometry*
 Math 1142—Short Calculus* or Math 1251—One-Variable Differential and Integral Calculus I*
 OMS 1020—Data Analysis and Statistical Inference for Managers
 12 credits of upper division (3xxx- or 5xxx-level) accounting electives

Electives (12 credits)

BFin 3000—Finance Fundamentals*
 BGS 3002—Business and Society*
 BGS 3004—International Business*
 BLaw 3058—Business Law: Contracts*
 Econ 3105—Managerial Economics
 Ins 5100—Risk Management and Insurance
 LM 3000—Introduction to Logistics Management
 Mgmt 3001—Fundamentals of Management*
 Mgmt 3004—Business Policy: Strategy Formulation and Implementation*
 Mktg 3000—Principles of Marketing*
 OMS 3000—Introduction to Operations Management

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 the Undergraduate Development Certificates in Business Administration programs 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 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. Those who contemplate such a long-range objective should consult an adviser (612-625-2500), who can monitor their 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 the last 90 credits.

Note—Upper division (3xxx- or 5xxx-level) management courses 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.

Pre-management Requirement (37-40 credits)

Acct 1050 (formerly 1024-1025)—Introduction to Financial Reporting*
Comp 1011—Writing Practice I*
Econ 1101, 1102—Principles of Microeconomics and Macroeconomics*
IDSc 1010—Fundamentals of Information Development and Use*
Math 1111—College Algebra and Analytic Geometry*
OMS 1020—Data Analysis and Statistical Inference for Managers
Psy 1001—Introduction to Psychology*

Core Requirements (12 credits) At least three courses selected from the following to total 12 credits

Acct 3001—Introduction to Management Accounting*
BFin 3000—Finance Fundamentals*
BGS 3002—Business and Society*
BGS 3004—International Business*
BLaw 3058—Business Law: Contracts*
Econ 3105—Managerial Economics
IR 3002—Personnel and Industrial Relations
IDSc 3030—Information Systems and Information Management
Ins 5100—Risk Management and Insurance
LM 3000—Introduction to Logistics Management
Mgmt 3001—Fundamentals of Management*
Mgmt 3004—Business Policy: Strategy Formulation and Implementation*
Mktg 3000—Principles of Marketing*
Math 1142—Short Calculus* or Math 1251—One-Variable Differential and Integral Calculus I*

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.

Important Note—Students who are contemplating continuing toward a degree from the Carlson School of Management should consult an adviser **before** they begin working toward the Level II Business Administration Certificate, and should choose electives that could become part of the degree program. Contact CEE Counseling (612-625-2500) for a list of the pre-management courses offered through Independent Study that meet the requirements of the Carlson School of Management.

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)

Acct 1050 (formerly 1024-1025)—Introduction to Financial Reporting*

Comp 1011—Writing Practice I*

Econ 1101, 1102—Principles of Microeconomics and Macroeconomics*

IDSc 1010—Fundamentals of Information Development and Use*

Math 1111—College Algebra and Analytic Geometry*

Math 1142—Short Calculus* or Math 1251—One-Variable Differential and Integral Calculus I*

OMS 1020—Data Analysis and Statistical Inference for Managers

Psy 1001—Introduction to Psychology*

Core Requirements (24 credits) At least six courses selected from the following to total 24 credits

Acct 3001—Introduction to Management Accounting*

BFin 3000—Finance Fundamentals*

BGS 3002—Business and Society*

BGS 3004—International Business*

BLaw 3058—Business Law: Contracts*

Econ 3105—Managerial Economics

IR 3002—Personnel and Industrial Relations

IDSc 3030—Information Systems and Information Management

Ins 5100—Risk Management and Insurance

LM 3000—Introduction to Logistics

Mgmt 3001—Fundamentals of Management*

Mgmt 3004—Business Policy: Strategy Formulation and Implementation*

Mktg 3000—Principles of Marketing*

OMS 3000—Introduction to Operations Management

Electives in the Carlson School of Management: At least 16 additional credits in upper division Carlson School courses. These should be selected in consultation with a CEE adviser.

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.

**Credit and Financial
Management
Certificate
(63–66 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.

For this certificate, **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 the last 90 credits.

Not all of the courses required for the National Association of Credit Management (NACM) certification are available at the University of Minnesota. 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 on obtaining the additional coursework elsewhere.

Note—Upper division (3xxx- or 5xxx-level) management courses 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.

For more information about working toward this certificate, contact CEE Counseling at 612-625-2500.

Core Requirements (55–58 credits)

Acct 1050 (formerly 1024-1025)—Introduction to Financial Reporting*

Acct 3001—Introduction to Management Accounting*

Acct 3101—Intermediate Financial Reporting

BFin 3000—Finance Fundamentals*

BLaw 3058-3078, 3088—Business Law*

Comp 1011—Writing Practice I*

Econ 1101, 1102—Principles of Microeconomics and Macroeconomics*

IR 3002—Personnel and Industrial Relations

Mgmt 3002—Psychology in Management*

Mktg 3000—Principles of Marketing*

Spch 1101—Fundamentals of Speech Communication: Oral Communication

Electives (8 credits)

Acct 3201—Intermediate Management Accounting

BFin 3100—Financial Management

BFin 3601—Bank Financial Management

Econ 3701/5721—Money and Banking*

GC 1275—Consumer Transactions and the Law

Ins 5100—Risk Management and Insurance

LM 3000—Introduction to Logistics Management

Mgmt 3001—Fundamentals of Management*

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. and Ph.D. programs.

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.

Note—Upper division (3xxx- or 5xxx-level) management courses 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 3xxx-level are primarily for juniors and seniors. Courses at the 5xxx-level are primarily for juniors, seniors, and graduate students.

Core Requirements (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, or Psy 5702—Psychology of Individual Behavior in Organizations

Psy 1001—Introduction to Psychology*

Psy 3801—Introduction to Statistical Methods, or approved substitute

Soc 1001—Introduction to Sociology

Electives (12 credits)

Econ 3501 or 5531—Labor Economics

Econ 5534—Economic Security

Econ 5561—Wages and Employment

IR 0001—Supervision I*

IR 3000—Topics in Industrial Relations*

IR 5000—Topics in Industrial Relations

any other 3xxx- or 5xxx-level IR course

IDSc 3030—Information Systems and Information Management

Mgmt 3001—Fundamentals of Management*

OMS 5160—Deterministic Modeling and Optimization

Psy 3011—Introduction to Psychology of Learning

Psy 3135—Introduction to Individual Differences

Psy 3201—Introduction to Social Psychology

Psy 5045—Psychology of Motivation

Psy 5501—Vocational Psychology

Psy 5701—Personnel and Industrial Psychology

Psy 5703—Psychology of Organizational Training and Development

Psy 5705—Work Motivation

Soc 5201—Introduction to Social Psychology*

Soc 5411—Formal Organizations

Management of Administrative Services Certificates

The Management of Administrative Services Certificates (Associate and Fellow) have been **discontinued**. Students who plan to complete these certificates should **call Nancy Gonzalez in CEE Counseling (612-625-2500) for important completion information.**

**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 an adviser (612-625-2500) to discuss 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.)

Students interested in a listing of the Undergraduate Development Certificates or additional information should contact CEE Counseling at 612-625-2500.

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 communication skills that enable them to handle support assignments in any engineering field. In addition, it gives them background for more specialized or advanced study as either an engineer or an 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.

Prerequisites: High school graduate or equivalent; two years of algebra and two years of geometry, including trigonometry.

Core Requirements (34-37 credits)

Comp 1011—Writing Practice I*

Chem 1001 or Chem 1051—Chemical Principles I

Math 1251 (formerly 1211)—One-Variable Differential and Integral Calculus I*

Math 1252 (formerly 1221)—One-Variable Differential and Integral Calculus II*

Math 1261 (formerly 1241)—Algebra and Geometry of Euclidean Space

ME 1025—Engineering Graphics*, or CSci 3101—A Fortran Introduction to Computer Programming, or CSci 3102—A Pascal Introduction to Computer Programming, or CSci 3322—Algorithms and Data Structures II, or CSci 3113—An Introduction to Programming in C

Phys 1251 or 1271/75, Phys 1252 or 1281/85—General Physics and Lab

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. (Request the current bulletin of the Institute of Technology by calling 612-625-2008.)



Through Independent Study, it is possible to earn credits that can be used in a variety of degree programs at the University. **However, there are no degrees available entirely through Independent Study.** And, there are limitations on the use of Independent Study credits in degree programs in certain departments or schools. If you want to apply credits earned through Independent Study to a University degree program, you are urged to consult an academic adviser in CEE 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 want to work toward a University degree, you should contact CEE Counseling (612-625-2500) early in your planning. It is also essential to read the official bulletin of the college to which you want to be admitted. College bulletins can be obtained by writing Admissions, University of Minnesota, 240 Williamson Hall, 231 Pillsbury Dr. SE, Minneapolis, MN 55455, or by calling 612-625-2008.

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 general education requirements 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 612-625-6501.

Teacher's Certificate

Most Independent Study courses can be used in the acquisition and renewal of teacher's certificates. However, Independent Study **does not evaluate teaching or education experience for a certificate or recommend courses.**

Questions concerning teacher certifications should be directed to the State Department 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).

Graduate School

316 Johnston Hall
Minneapolis campus

Credits earned through most Independent Study courses are not accepted for graduate credit in the University of Minnesota Graduate School. Specified broadcast television courses, at the 5xxx-level, are available for graduate credit (information is given in the course study guide). The same courses, when taken as video-assisted courses, do **not** carry graduate credit. Independent Study courses may be used 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 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*. Independent Study courses may be used to satisfy the liberal education requirement, as well as some of the technical courses. A minimum of 90 credits of on-campus coursework would be necessary for any IT degree. With careful planning, it is possible to complete approximately 25 percent of an Institute of Technology degree through Independent Study.

Assistance in planning a course of study and an evaluation of transfer credits is available by appointment at CEE Counseling; 612-625-2500.

Carlson School of Management

290 Hubert H.
Humphrey Center
Minneapolis campus

Approximately half of the course requirements for the Bachelor of Science in Business (B.S.B.) are available through Independent Study. The Carlson School of Management will accept a maximum of 17 credits of 3xxx- and 5xxx-level business coursework completed through correspondence study toward the B.S.B. degree. Interested students should arrange for early consultation by contacting CEE Counseling 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 CEE Counseling. A copy of "Pursuing a Bachelor's Degree Through Continuing Education and Extension" may also be obtained through CEE Counseling.

Note—Students taking Carlson School of Management upper division undergraduate (3xxx- or 5xxx-level) courses 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

The *College of Liberal Arts Bulletin* (1992-94) and the Spring 1993 bulletin supplement are essential for students planning to earn B.A., B.S., B.F.A., B.M., or B.I.S. degrees. Students should contact CEE Counseling for a list of Independent Study courses that can be used to satisfy CLA distribution requirements or for further information on any of the CLA programs. With careful planning, it is possible to complete approximately half of a CLA degree through Independent Study.

Associate in Liberal Arts (A.L.A.)

The College of Liberal Arts no longer offers the A.L.A. degree as a regular degree of the college. The degree may be granted only by special petition. Students who want information about the A.L.A. degree should contact the A.L.A. graduation adviser in 114 Johnston Hall (612-624-4545) for information regarding eligibility.

Bachelor of Arts (B.A.)

Candidates for the Bachelor of Arts degree must complete a minimum of 180 acceptable credits, 72 in 3xxx- and 5xxx-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 the group A-D requirements. Finally, B.A. candidates must complete a major sequence in the field of their choice and complete at least 28 credits in 3xxx- and 5xxx-level courses from areas outside their majors. (Interdepartmental majors are exempt from the 28-credit requirement). 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 in six areas: Child Psychology, Speech and Hearing Science, Economics, Geography, Sociology, and Urban Studies. Its requirements are substantially those of the B.A. program except that the second language, world studies, and U.S. Cultural Pluralism requirements are usually not included, and the major may be more extensive and concentrated. For further information contact CEE Counseling 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, 75 of which must be in 3xxx- or 5xxx-level courses in the areas of concentration. Independent Study offers sufficient courses to earn at least the first 90 credits toward a B.I.S. degree. For further information, contact CEE Counseling at 612-625-2500.

University College

317 Walter Library
Minneapolis campus

University College offers two bachelor's degree programs, each of which enables students in Minnesota to design their own Bachelor of Arts or Bachelor of Science degree and to incorporate large amounts of learning done through Independent Study. Information is available from the college office or from the appropriate program office (see below).

Inter-College Program (ICP) allows students to design an intercollegiate or interdisciplinary program suited to their individual objectives. ICP is appropriate for those students who have clearly defined academic goals and discover they cannot achieve those goals

without an inter-college curriculum. A student's ICP plan is drawn up with guidance and approval from academic advisers and designated faculty advisers. The degree program may include two or three areas of concentration, or may integrate courses from two or more colleges into a cohesive theme. Depending on how a student fulfills liberal education requirements, ICP leads to either a bachelor of arts or a bachelor of science degree. With careful planning, it is possible to complete a baccalaureate degree in the Inter-College Program through Independent Study if you have already completed two or three years of college or have about 120-130 credits. The limitation to completing an ICP degree via Independent Study is the number of courses available in various departments.

To be considered for admission to ICP, a student must have a 2.00 grade-point average; completed at least 80 credits of college work (minimum of 15 credits from the University of Minnesota and at least 9 credits of upper division work); completed designated prerequisites and/or meet grade-point average requirements for areas with concentration or collegiate grade-point restrictions; and prepared an approved ICP degree plan and goal statement.

The **Program for Individualized Learning** serves students with clear educational goals who want to design and carry out individualized B.A. or B.S. degree programs. Students tend to select this 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, curriculum 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.

For further information, contact:

Inter-College Program
University of Minnesota
107 Armory
15 Church St. SE
Minneapolis, MN 55455
612-624-2004

Program for Individualized Learning
University of Minnesota
107 Armory
15 Church St. SE
Minneapolis, MN 55455
612-624-4020



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Registration Form

Please Print

Social Security Number - -
 University ID #
 Last Name Middle Initial
 First Name Title (Mr Ms Mrs Miss Dr)
 Address _____
 City _____ State _____ Zip Code _____
 County _____ Country _____
 Home Phone # (_____) _____ - _____ Work Phone # (_____) _____ - _____
 Fax # (_____) _____ - _____ Gender Male Female
 Birthdate _____ / _____ / _____

Use the Independent Study bulletin to complete the following. High school courses can be taken A-F grading only.

(DIS NO.)	DEPT.	COURSE NO.	COURSE TITLE	CREDITS	A-F OR S-N	TUITION
						\$
						\$
						\$

Have you enrolled in a University of Minnesota Independent Study course before? Yes No


Have you completed the prerequisites? Yes No

G.I. Bill registration? Yes No

Type of Payment	Amount Due	Bill to Department/Company: (Full Payment Only) (attach authorization)
<input type="checkbox"/> Full Payment	Tuition \$ _____	Name _____
	Textbooks \$ _____	Address _____
<input type="checkbox"/> Partial Payment (1/3 tuition + \$8 service charge per course)	Partial Payment Service Charge \$ _____	City _____
	Study Guide \$ _____	State _____ Zip Code _____
	Audiotapes* \$ _____	
	Videotapes \$ _____	Credit Card Information (Full Payment Only)
	Other, Supplies* \$ _____	<input type="checkbox"/> VISA Exp. Date _____
	Postage \$ _____	<input type="checkbox"/> MasterCard Card # _____
	Tax* \$ _____	Name on Card _____
	TOTAL \$ _____	Signature _____

To register by fax: Full payment only. Provide VISA or MasterCard information. 

You are responsible for all policies in the Independent Study bulletin.

Student's Signature _____ Date _____ 

Request for Information, Forms, Bulletins

Please use this form to request information, forms, and bulletins. We'll be happy to send bulletins to your friends, too.

Send request to:
Department of Independent Study
University of Minnesota
45 Wesbrook Hall
77 Pleasant Street SE
Minneapolis, MN 55455

Please send me:

- | | |
|--|--|
| <input type="checkbox"/> Independent Study bulletin | <input type="checkbox"/> current TV course listing |
| <input type="checkbox"/> bulletin for University College | <input type="checkbox"/> registration form |
| <input type="checkbox"/> introductions to the following course(s): | |

Name _____ Soc. Sec. # _____ U of M ID # _____

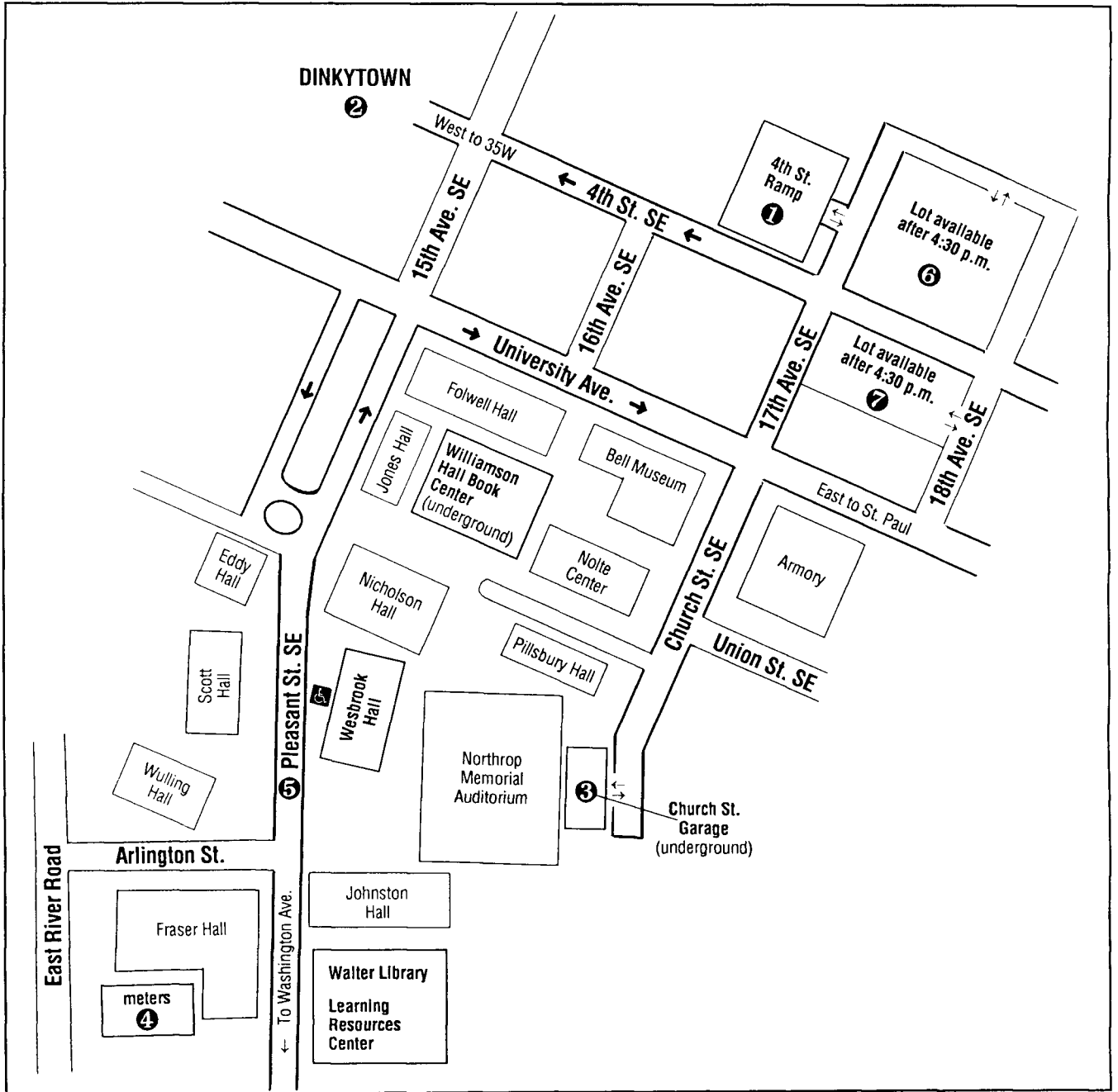
Address _____
Street/RR#/P.O. Box# _____ Apt. # _____
City _____ State _____ Zip Code _____

Please send an Independent Study bulletin to:

Name _____

Address _____
Street/RR#/P.O. Box# _____ Apt. # _____
City _____ State _____ Zip Code _____

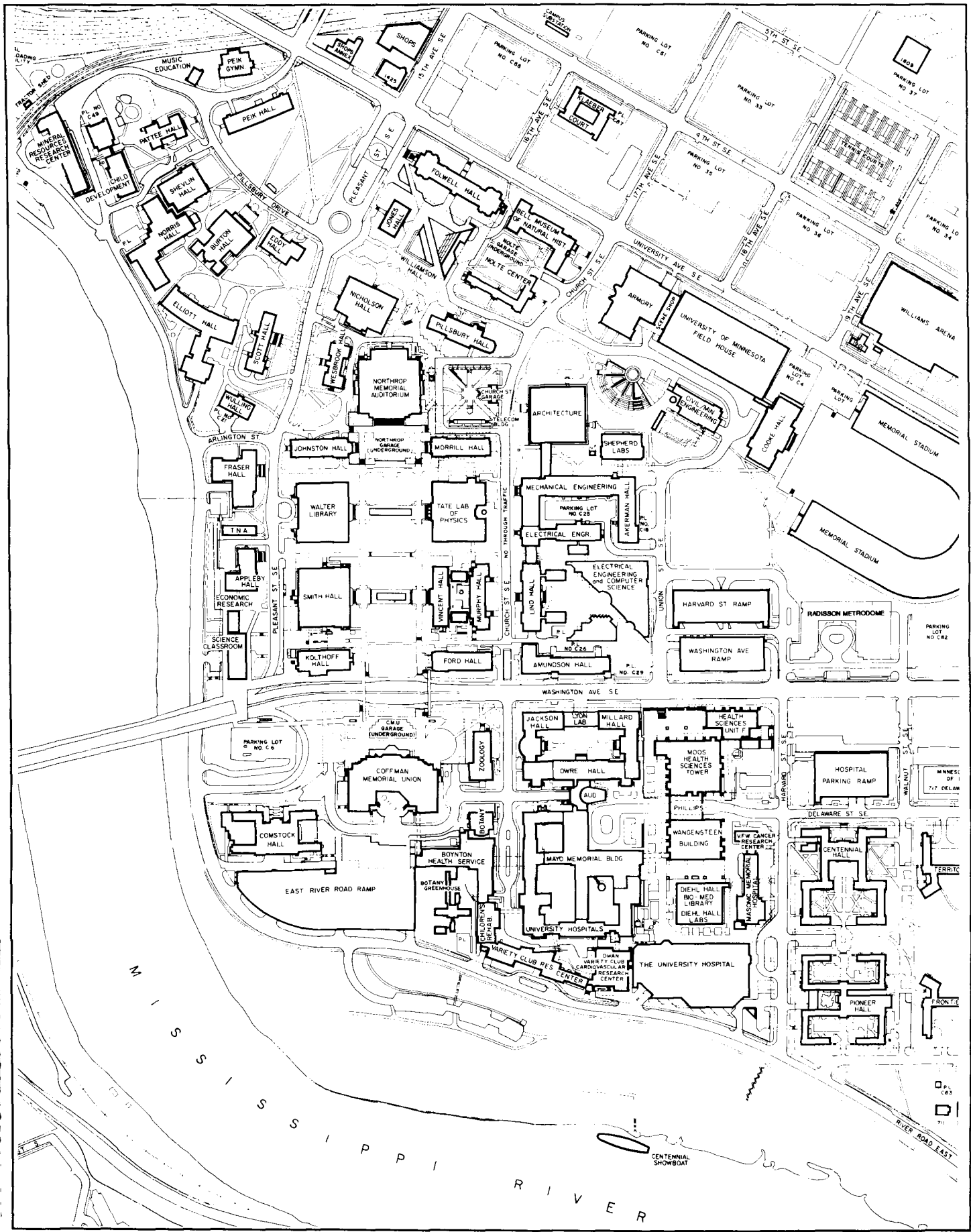
Parking Map



University of Minnesota

Twin Cities Campus

East Bank



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University of Minnesota
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77 Pleasant Street S.E.
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