

UNIVERSITY OF MINNESOTA

BULLETIN

1992-1994



On the cover:

LeeAnn Thommes is a graduate student majoring in cello performance at the University of Minnesota School of Music. She is also a member of the University Symphony Orchestra and principal cellist of the St. Cloud Symphony Orchestra in St. Cloud, Minnesota.

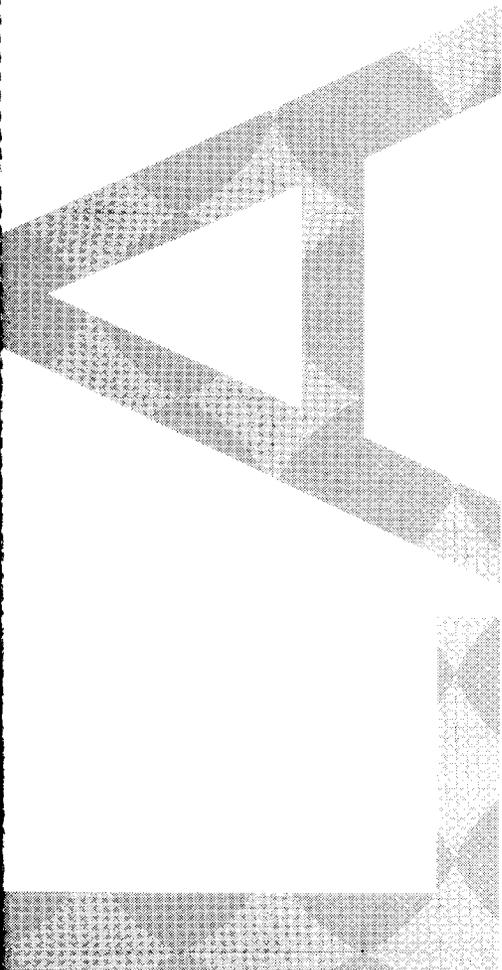
A 21st-century education provides:

- ❖ **breadth and flexibility,**
- ❖ **active learning,**
- ❖ **world-class mentors,**
- ❖ **international perspective.**

So does the

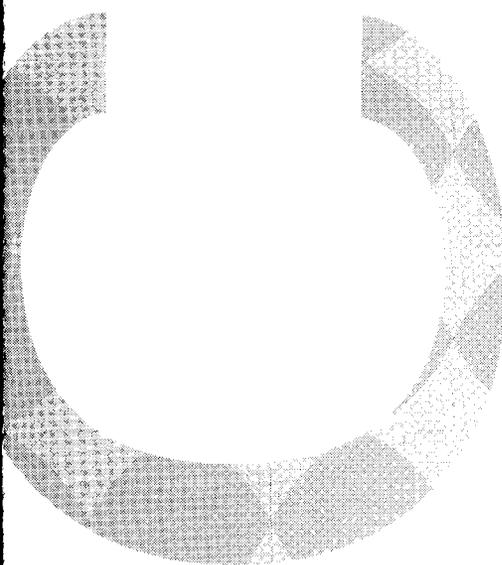
College of

Liberal Arts.



College of Liberal Arts

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General Information

Resources

College of Liberal Arts (CLA) courses, major programs, procedures, learning opportunities, and degree and other requirements are described in this biennial bulletin.

The CLA bulletin does not list 8xxx courses, which are open to graduate students only. See the *Graduate School Bulletin* for these listings.

Class Schedule—This publication is distributed each quarter with registration materials. It lists course offerings with class hours, rooms, instructors, and prerequisites, as well as registration instructions, fees, maps, final exam schedules, and other useful information.

Official Daily Bulletin—Published in *The Minnesota Daily*, this column contains announcements about University courses, registration schedules, study opportunities, meetings, and activities.

Other Resources—College offices maintain information about all majors and course offerings. The field experience directories, on file at the Office for Special Learning Opportunities (OSLO, 220 Johnston Hall), are guides to outside-the-classroom learning opportunities. University bulletins are distributed in 240 Williamson Hall.

Advising Services—Every CLA student is assigned for academic advising to a staff or faculty member or group of advisers for help with questions the student cannot answer. For information about the advising system and other advisory services, see Advising in the first section of this bulletin.

Policies

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

Equal Opportunity—The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation. In adhering to this policy, the University abides by the Minnesota Human Rights Act, Minnesota Statute Ch. 363; by the Federal Civil Rights Act, 42 U.S.C. 20000e; and by the requirements of Title IX of the Education Amendments of 1972; by Sections 503 and 504 of the Rehabilitation Act of 1973; by Executive Order 11246, as amended; 38 U.S.C. 2012, the Vietnam Era Veterans Readjustment Assistance Act of 1972, as amended; and by other applicable statutes and regulations relating to equality of opportunity.

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

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, telephone number, dates of enrollment and enrollment termination, college and class, major, adviser, academic awards and honors received, and degrees earned—is considered public or directory information. Students may prevent the release of public information only during their terms of enrollment. To do so, they 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 the Office of the Registrar, 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).

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.

Health Clearance—Students who are not citizens of the United States must receive a health clearance from Boynton Health Service before registering for the first time at the University. Students will be tested for tuberculosis unless they present proof in English of testing within the past 12 months. Clearance is arranged as part of the Preregistration Program for International Students. Other students should contact the information desk at Boynton Health Service, 410 Church Street, Minneapolis, MN 55455 (612/625-8400), for instructions.

English Proficiency—If English is not your native language, you may be required to take the Test of English as a Foreign Language (TOEFL) or the Michigan English Language Assessment Battery (MELAB). To register for the TOEFL, contact the agency that handles TOEFL registration in your country or write to the Educational Testing Service (Box 899, Princeton, NJ 08540 USA) at least 10 weeks before any scheduled test date. If you are already in the Twin Cities area, you may register for the MELAB with the Minnesota English Center, 320 16th Ave., S.E., University of Minnesota, Minneapolis, MN 55455, or call

612/624-1503. To register for the MELAB outside the Twin Cities area, contact the English Language Institute, Testing and Certification Division, University of Michigan, Ann Arbor, MI 48109 USA, or call 313/764-2416.

Extracurricular Events—No extracurricular events requiring student participation may be scheduled from the beginning of study day to the end of finals week. Exceptions to this policy may be granted by the Senate Committee on Educational Policy. The Senate advises all faculty that any exemption granted pursuant to this policy shall be honored and that students who are unable to complete course requirements during finals week shall be provided an alternative and timely opportunity to do so.

Postal Statement

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Published by the University of Minnesota, Office of the Vice President for Student Affairs, Publications and Communications Office, 110 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455; once in February, August, and November; twice in March; three times in April and September; and four times in July. Second-class postage paid at Minneapolis, Minnesota. POSTMASTER: Send address changes to University of Minnesota, 110 Williamson Hall, 231 Pillsbury Drive S.E., Minneapolis, MN 55455.

Letter from the Dean

Welcome to the College of Liberal Arts!

As part of our commitment to excellence in undergraduate education, the college offers more than 60 majors, an outstanding faculty drawn from around the world, and several departments that rank among the top in the country.

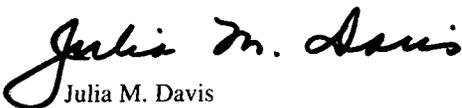
In your degree program you will integrate fields of knowledge through interdisciplinary and thematic courses. You will emphasize basic skills in writing, reading, oral communications, second languages, and mathematics. You will have the opportunity to examine values, ethics, and social responsibility and learn about the cultural diversity of the world and U.S. society. You will have opportunities for active learning, such as internships and study abroad.

The college provides a variety of programs to enhance or personalize your degree program. Programs, such as the Honors Program, the Martin Luther King Program, and those offered through the Office of Special Learning Opportunities, the Foreign Studies Office, and the Career Development Office, will help you get the most from your undergraduate experience.

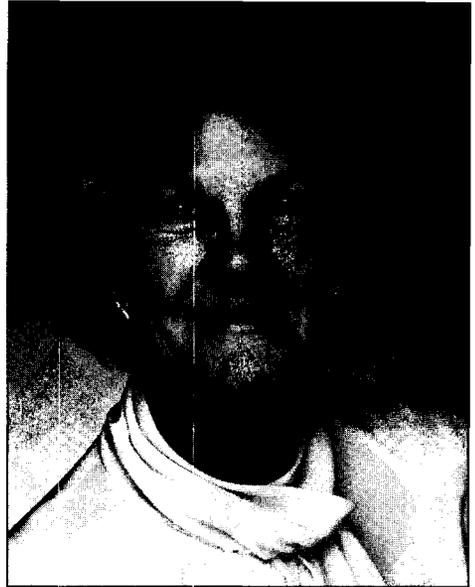
And, remember, the most successful students are those who make college their own community. In the University and the surrounding area, you will find organizations for almost any interest. Through them, you will have the opportunity to forge new friendships, gain insights, and develop talents that will remain with you throughout your lifetime.

I am pleased you have selected or are considering the College of Liberal Arts for your undergraduate education. The faculty, professional staff, and I stand ready to help you create and realize your educational goals.

With best wishes,

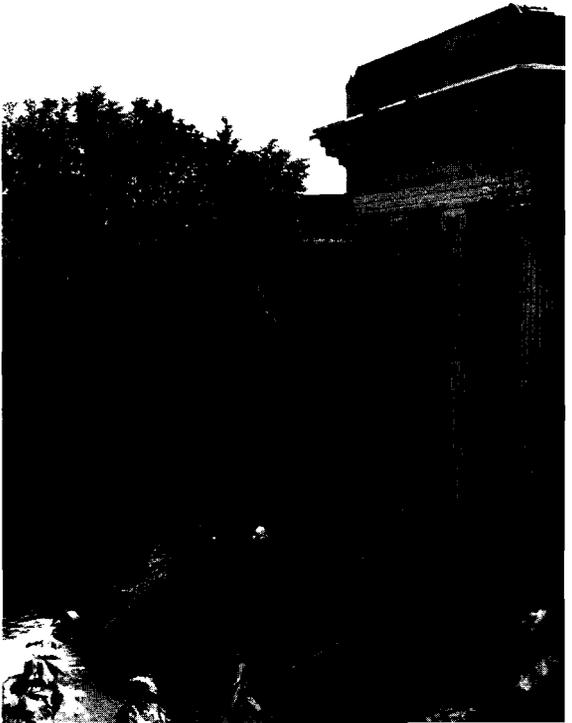


Julia M. Davis
Professor and Dean



College of Liberal Arts

The College and Its Procedures



The College and Its Procedures

Liberal Education and the Student

At the heart of every great university is a college encompassing the basic disciplines of knowledge. That college at the University of Minnesota is the College of Liberal Arts (CLA). The college was formally established in 1868, 17 years after the founding of the University.

The traditional branches of knowledge are housed here—the social sciences, the humanities and fine arts, and the natural sciences. In addition, the college offers professional programs with close ties to these fields. Study and research opportunities are available to you in more than 60 major areas, from the usual, such as English, economics, and history, to the less usual, such as women's studies, theoretical statistics, and speech and hearing science. They include disciplines as old as philosophy and as new as computer science. You also may choose to design an individualized major program.

About 14,500 undergraduate students and about 2,000 graduate students were enrolled in CLA programs in fall 1991. The college is staffed by nearly 500 permanent faculty members who can share the most current research in their fields.

Many students complete their education in CLA. Others take their basic liberal arts coursework in CLA and then transfer to another unit of the University such as the Carlson School of Management or one of the health science schools.

As the port of entry to the University for most students, CLA prides itself on its Student Academic Support Services unit, which offers advising assistance and other services. The student services staff can help direct you to the many learning opportunities available within CLA and the University.

The degree requirements established by the college are designed to give you an education solidly based in the liberal arts. Courses you are asked to take to meet general education requirements will

introduce you to modes of inquiry and subject matter characteristic of the major branches of knowledge. In a recognition of the importance of communication and the ability to write, the composition requirement is divided between a lower-level course focusing on basic writing skills and an upper-level course related to your major area of interest. The world studies and cultural pluralism requirements will give you the opportunity to look at cultures substantially different from your own. The language requirement is designed to make you proficient in a second language.

A liberal education means not only a breadth of knowledge, but depth and proficiency in a single field of knowledge. You will select a major field and, as part of the study of that discipline, prepare a major project, usually a written paper.

The College of Liberal Arts' faculty believes a liberal arts education gives you the analytical skills and flexibility needed for shaping your life and for adapting to new careers.

Liberal Arts Degrees

The College of Liberal Arts offers five bachelor's degrees—bachelor of arts (B.A.), bachelor of fine arts (B.F.A.), bachelor of science (B.S.), bachelor of individualized studies (B.I.S.), and bachelor of music (B.M.). The bachelor's degrees have many requirements in common. Information about requirements appears under the Degree Requirements heading in this section of the bulletin.

If you are making satisfactory academic progress, you generally are free to select the major and minor of your choice. Some programs, however, limit the number of majors admitted (architecture, the B.F.A., the B.M., computer science, the B.S. in economics, English, international relations, journalism, music, political science, and speech-communication in CLA, as well as biology, management, education, engineering, some health science programs, and some programs in other colleges).

Bachelor of Arts Degree—This degree can be earned through majors in most CLA departments and programs. Its breadth and diversity in general education make it valuable as a base for many kinds of careers or for advanced study. CLA offers several professional majors and specializations as well as interdepartmental programs for the B.A. degree.

Bachelor of Fine Arts Degree—The Department of Studio Arts offers the B.F.A. to students who demonstrate superior professional promise. Information about program admission and degree requirements can be obtained from the B.F.A. booklet, available in the department office.

Bachelor of Science Degree—The B.S. degree is offered in six areas: child psychology, speech and hearing science, economics, geography, sociology, and urban studies. The B.S. degree provides heavier major concentration than the B.A., thus leading to more specialized undergraduate study.

Bachelor of Individualized Studies Degree—To earn this degree, you propose an individualized program of study composed of three areas of concentration that is based on your personal academic objectives. Proposals must be evaluated and approved by at least two faculty advisers.

Bachelor of Music Degree—The School of Music offers the B.M. degree for students who demonstrate superior professional promise in the areas of performance, composition, theory, music education, and music therapy.

CLA Degrees Earned Concurrently With Other University of Minnesota Degrees—If you transfer to another college on the Twin Cities campus, you may complete your CLA degree by finishing all CLA degree requirements while pursuing degree work in your new college. See your college office for information.

Second Degrees, Second Majors, Minors—If you have earned a bachelor's degree at another institution, you may earn a CLA bachelor's degree with a different major by completing all degree requirements, including 45 CLA credits. If you are a CLA graduate or are in the process of earning a CLA degree, you may earn a different CLA bachelor's degree by completing 45 additional CLA credits and meeting all requirements for the second degree. If you are a CLA graduate and are interested in completing requirements for a second major, but not for a second bachelor's degree in the college, you may complete requirements for another major and have that accomplishment recorded on your official transcript. In addition, students in other colleges may earn majors or minors in CLA without completing the general education or other requirements for a CLA degree.

Degree Requirements

General Education Requirements

To assure a liberal education with the proper balance and breadth of study, your degree work is guided by a framework of general education requirements. These general requirements are designed to introduce you to the modes of inquiry and subject matter characteristic of the major branches of knowledge. While meeting these requirements, you can satisfy personal interests, expand knowledge and understanding, and explore academic and vocational options.

Although many students spread general education course choices over their years of college work, most take a considerable portion of them in the first two years. Introduction to a well-chosen variety of fields can make the last years of work more fruitful, and many general education courses are prerequisite to 3xxx- and 5xxx-level required and elective courses.

The last section of this bulletin explains each category and lists the courses that may be taken by students for each group.

General Education Requirements

B.A., B.I.S., and B.S. Degrees—Candidates must fulfill the following general education requirements (at least 48 credits):

Group A—Language, Logic, Mathematics, and the Study of Argument

8 to 10 credits (normally two courses, at least one of which must deal with a formal language or formal symbolic system); see list of courses meeting the formal language requirement in the last section of this bulletin.

Group B—The Physical and Biological Universe

12 to 15 credits (three 4- or 5-credit courses, one to include a related laboratory; two of the courses must be chosen from the list of foundation courses listed in the last section of this bulletin)

Group C—The Individual and Society

16 to 20 credits (normally four courses, one selected from each of the following three categories and a fourth from one of them)

1. Individual and Institutional Behavior
2. The Historical Perspective
3. Social and Philosophical Analysis

Group D—Literary and Artistic Expression

12 to 15 credits (normally three courses)

B.F.A. and B.M. Degrees—Candidates must fulfill the following general education requirements:

Groups A, B, and C—8 to 10 credits (normally two courses) each; a minimum of 8 credits must be completed in each group, and the total credits for the three groups must equal at least 28

Group D—Requirement automatically satisfied by major field

Second Language Requirement

The study of a second language is considered essential for a liberal education. CLA expects students to begin second language study in high school.

Knowledge of a second language gained before entering CLA may be used to meet part or all of the language requirement. If you are unsure about your level of proficiency, you may consult your college office adviser for placement assistance. Normally, one to two years of high school study equals one quarter of college study.

You may repeat language study completed in high school, but it is to your advantage to start your college work at as high a level as possible.

Qualified students may meet part or all of the entrance and graduation requirements by passing examinations arranged with appropriate departments. See the Examination-for-Credit Programs section of this bulletin and your college office.

If you are an international student whose primary language is not English, you are exempted from the requirement. You may not earn credit for skills in your primary language.

University preparation requirement—All entering first-year students will be expected to meet the University's 1991 second language entrance requirement (two years of high school language instruction). Transfer students with 39 or more credits must meet the entrance requirement beginning fall 1993.

CLA entrance requirement—All B.A., B.F.A., and B.I.S. students who wish to register for French, German, or Spanish courses beyond the entrance requirement, must pass the appropriate entrance proficiency examination. Students who meet the entrance requirement may continue their study at higher levels in the same language or may begin study in another language.

Graduation requirement—The graduation requirement for the B.A., B.F.A., and B.I.S. degrees requires students to demonstrate proficiency usually attained after the first six quarters of college study in one language by passing a graduation proficiency examination. (For students who entered CLA before fall 1988, the graduation requirement for the B.I.S. is different. Please consult with an adviser in the B.I.S. program for more details.)

Students may also apply American Sign Language toward the graduation requirement; contact your college office for more information.

World Studies Requirement

In order for students to transcend the boundaries set by major European and North American educational traditions, B.A. and B.I.S. degree students are asked to examine cultures substantially different from their own. The requirement is completion of at least two courses (8 to 10 credits) dealing with the cultures of Asia, Africa, Latin America or with traditional American Indian cultures. These courses also may be used to satisfy other degree requirements. A list of approved courses appears in the last section of this bulletin.

U.S. Cultural Pluralism Requirement

This requirement emerged from an acknowledgment of the importance of studying diverse cultures, in particular African American, American Indian, Asian American, and Chicano cultures. B.A. and B.I.S. degree students are required to complete at

least two courses (8 to 10 credits) with a primary focus on social and cultural diversity, with special attention to race and ethnicity. These courses may be used to satisfy other degree requirements. A list of approved courses appears in the last section of this bulletin.

English Composition Requirement

Candidates for all CLA bachelor's degrees must fulfill the English composition requirement. The composition requirement is explained in detail under English Composition in the Major Requirements and Course Descriptions section of this bulletin.

Major Requirements

Major Status—Admission to major status in some CLA degree programs requires department permission: architecture, biology, computer science, the B.S. in economics, English, I.D.I.M., international relations, journalism, music, the B.M., political science, speech-communication, the B.I.S., and the B.F.A. If you are interested in one of these programs, consult the appropriate department office.

Required Preparatory Courses—Most major programs require preparatory or background courses. Freshman and sophomore programs should include a substantial number of these because they qualify you to enter advanced and major work. Many of them satisfy some of the general education requirements. See individual program listings in the second section for required preparatory courses.

Major Sequences—Candidates for all CLA degrees except the B.I.S. must complete a major to gain depth of understanding in an area of study. More than 60 major sequences are offered in the college; the second section of this bulletin describes them. Requirements change from time to time. Check with the undergraduate studies office in the major department for current information (ask for an up-to-date major requirements sheet).

The College and Its Procedures

Majors are programs of concentration. Each represents the judgment of its department about appropriate study of the discipline at the undergraduate level. Individual major programs may be modified by the department or your major adviser.

Major Project—Most departments require that students complete a major project. The major project is intended to demonstrate analytic and conceptual skills as well as an understanding of the mode of inquiry common to the discipline. For most majors, the format of the project will be a written report, which may be completed in conjunction with an upper-level composition course. Some departments require a performance or other projects.

Double Major—You may earn a “double major” by completing background and major requirements for two areas of concentration in addition to other degree requirements. You should usually declare a double-major program by the beginning of your senior year, but you should start to complete basic requirements earlier. If you have a double major, you need not meet the B.A. requirement of 28 3xxx and 5xxx credits outside the major. Students pursuing a double major are urged to consult with both departments about a possible joint major project.

Outside-of-Major Requirement—B.A. programs must include at least 28 3xxx and 5xxx credits outside the major department. Heavy concentration in a major field that limits breadth of learning may defeat the basic purpose of a liberal education, which encompasses breadth as well as depth of knowledge. Established and individualized interdepartmental majors listed on page 177-178 are exempt from this requirement.

Established Interdepartmental Majors—These majors are offered in African studies, American studies, classical civilization, East Asian studies, international relations, Jewish studies, Latin American studies, Middle Eastern and South Asian studies, religious studies, Russian area studies, urban studies, and women’s studies. Requirements are

detailed under appropriate headings in the second section. These majors may be modified in individual cases. Such majors are exempt from taking 28 3xxx and 5xxx credits outside the major department.

Individually Designed Interdepartmental Major—This major allows you to design a unique program with an interdisciplinary theme or focus that meets your individual academic interests. It requires approval by the Interdepartmental Major Office, 220 Johnston Hall, and three faculty advisers. The major usually combines coursework from three or more CLA departments. A senior project is required to integrate the areas of concentration. See the second section for details.

Bachelor of Individualized Studies—For this degree, you design an individualized program of 85 credits that must be evaluated and approved by two or more faculty advisers. Although you have three areas of concentration instead of a major, your program must have a coherence based on stated academic objectives. See the second section for details. The Bachelor of Individualized Studies Office is located in 220 Johnston Hall.

Minor

A minor is an approved concentration of 15 to 24 3xxx and 5xxx credits in a single department or program. It is not a requirement for graduation, but rather it is an option available to all but B.I.S. candidates and to degree candidates in other colleges who wish to complete an area of concentration outside their major. CLA allows up to 20% of minor credits to be taken on an S-N basis or earned through directed study, directed instruction, or independent study. Minors are listed in the second section.

CLA Bachelor's Degree Requirements

Type of Requirement	Bachelor of Arts	Bachelor of Science	Bachelor of Fine Arts	Bachelor of Music	Bachelor of Individualized Studies
TOTAL CREDITS	180	180	180	180 (117 in music)	180 (60 after admission to program)
CLA CREDITS	45 in CLA courses, at least 30 in the senior year				
3XXX OR 5XXX CREDITS	Minimum of 72, 28 outside the major	Minimum of 72	Minimum of 72	Minimum of 72, 12 outside the major	Minimum of 75 in B.I.S. areas of concentration
QUALITY STANDARDS	Grades of A, B, C, or S in 180 CLA credits, in 72 3xxx or 5xxx credits, and in the minimum number of 3xxx or 5xxx credits required by the major department. (Up to 12 credits of D may be used toward the 180-credit requirement. Most departments limit D grades in the major.)				
A-F GRADING	At least half of the CLA credits applied toward a degree, never fewer than 45, must be taken on A-F grading. Some departments restrict S-N grades in the major.				
ENGLISH COMPOSITION	Completion of Writing Practice Requirement and a 3xxx-level composition course in the junior or senior year, or exemption				
SECOND LANGUAGE	Proficiency usually attained after 6 quarters of study; see page 8 and last section		Proficiency usually attained after 6 quarters of study; see page 8 and last section		Proficiency usually attained after 6 quarters of study; see page 8 and last section
GENERAL EDUCATION	At least 48 credits; see page 7 and last section		Minimum of 28 credits in groups A, B, and C; see page 7 and last section		Minimum of 48 credits; see page 7 and last section
WORLD STUDIES	8 to 10 credits; see page 9 and last section				8 to 10 credits; see page 7 and last section
CULTURAL PLURALISM	8 to 10 credits; see page 9 and last section				8 to 10 credits; see page 9 and last section
MAJOR	Approval of program by department				Approval of 85-credit program by two or more advisers
MINOR	Optional: 15 to 24 3xxx or 5xxx credits in approved concentrations				

General Credit Requirements

Credit Requirements—A minimum of 180 credits acceptable to the college are required for all CLA bachelor's degrees; 72 of these credits must be in 3xxx and 5xxx courses (except for the B.F.A.). All credits earned with grades of A, B, or C and a restricted number earned with grades of S or D (see Credit and Grade Standards) are acceptable.

In order to earn a CLA degree, you must complete at least 45 CLA credits graded A-C. You must also complete 30 of your last 45 credits with University of Minnesota, Twin Cities coursework.

"CLA credits" are credits earned in courses offered by departments listed in the second section of this bulletin and taken through registration on the Twin Cities campus. "Non-CLA credits" are credits earned in liberal arts courses offered by other University colleges on the Twin Cities campus. "Non-liberal arts credits" are credits earned in approved college-level courses in technical or professional fields.

Credits earned by examination and credits for courses not offered by departments listed in this bulletin may not be applied toward the required 45 CLA credits.

Non-CLA credits may be applied toward general education requirements as approved by the college, but may not be applied toward major requirements without department approval, and may not be applied toward the required 45 CLA credits. (Lists of approved non-CLA courses are available in your college office.)

Non-liberal arts credits may not be applied toward general education or major requirements. A maximum of 28 non-liberal arts credits may be applied toward the 180-credit requirement (except for the B.I.S., which allows 40 credits from non-CLA departments; all non-CLA and non-liberal arts credits for the B.I.S. must be approved). A maximum of six approved non-liberal arts credits may be from Physical Education activity courses. Credits from typing, word processing, short-hand, study skills, first-aid, and courses clearly remedial or vocational in nature may not be applied toward any credit

requirements. Consult with your college office staff about approved non-liberal arts courses.

Degree Requirements after an Absence—If you have not attended CLA for *more than two years* and had completed fewer than 75 credits when you left CLA, consult with a Scholastic Standing Committee representative or with your graduation adviser to determine the graduation requirements that apply to you. If you had completed 75 or more credits at the time of last attendance, you may elect to satisfy either the former or the current requirements, although you are encouraged to complete the current requirements.

If *less than two years* has passed since you last attended CLA, you are under the requirements applicable to you before your absence.

Other Graduation Guidelines

Application for Graduation—You must apply for graduation in 150 Williamson Hall early in the quarter you intend to graduate. See the *Class Schedule* for exact deadlines.

Admission

The faculty and staff of the College of Liberal Arts encourage applications from persons of color or other groups that have been underrepresented in the college. The College of Liberal Arts is committed to providing equal opportunity to all qualified persons who seek access to its programs, facilities, and services, and to establishing fair educational standards and applying them equitably in making decisions about admission and academic standing.

Prospective Student Services

Preadmission advising and assistance are offered by the college. If you would like to visit the college and talk about plans for study here, contact CLA Prospective Student Services and Admissions, 49 Johnston Hall, University of Minnesota, 101 Pleasant Street

S.E., Minneapolis, MN 55455 (612/624-4110). CLA advisers will answer your questions, provide information, and arrange meetings with faculty members for you. The Department of University Relations (612/624-6868) schedules campus tours. Please call two weeks in advance, if possible.

Enrollment Limits—The University of Minnesota has approved enrollment limits for the Twin Cities campus. To remain within those limits, the College of Liberal Arts must limit the number of new students it admits. If the college exceeds its enrollment limit, there will be inadequate funding to meet the educational needs of its students. The college will admit as many qualified students as possible without exceeding its projected enrollment limit.

Application Procedures

How to Apply—Prospective students should request application materials from the Office of Admissions, 240 Williamson Hall, University of Minnesota, 231 Pillsbury Drive S.E., Minneapolis, MN 55455 (612/625-2008). There are separate applications forms for 1) freshmen and transfers from colleges outside the University of Minnesota system, 2) transfers from other colleges inside the University of Minnesota system, 3) international students, 4) early admission candidates, and 5) adult specials. Freshmen also may use the Minnesota College Admission form, but the University of Minnesota application form is preferred.

Freshmen must submit the application form, an official high school transcript,

official transcripts for any college work attempted, standardized test score reports, the application fee, and any other information requested by the college.

Transfer students must submit the application form, official transcripts from each institution previously attended, the application fee, and any other information requested by the college. In fall 1993, transfer students also may be required to submit their high school transcripts.

Applicants with fewer than 39 quarter credits or 26 semester credits of college work must follow the freshman application procedure and deadlines.

When to Apply—Prospective students should apply as early as possible. Applications should be complete, including transcripts from other schools, and submitted by the priority deadline listed below. Students may continue to be admitted if their applications are submitted by the final deadline.

International students are strongly advised to apply by the opening of the application review period for the quarter they wish to enter. Applications from international students must be complete by the following deadlines: fall—April 1; winter—October 1; spring—January 1 (transfers only). Transcripts and English test score results must be received by the deadline.

Updating an Application—If you apply and are not admitted and you wish to be considered for a later quarter, you must request that your application be updated before we close admissions for the new quarter.

Application Deadlines

	<i>First-year Priority</i>	<i>Transfer Priority</i>	<i>Final</i>
Fall	December 15	April 1	June 1
Winter	September 1	September 1	October 15
Spring	*	December 1	January 15

* No admission of first-year or transfer students with less than 39 credits in spring quarter.

Updating an Offer of Admission—If you are admitted and do not enroll for that quarter, you must request that your admission status be updated before we close admissions for the new quarter. If admission standards have changed in the meantime, your request will be reviewed in terms of the new requirements.

Summer Session Admission—Students are not admitted to the college for summer session I or II, but can enroll as summer-only students. Summer session enrollment and registration information appears in the *Summer Session Bulletin*, available in February; you may register in advance beginning in May.

Extension-Only Registration Upon Admission—If you register for Extension courses only your first quarter, go to 314 Nolte Hall to enroll in the combined CLA/Extension degree program so your CLA admission status will not be canceled.

New Freshman and Freshman Transfer Admission

High school graduates with no previous college work enter as new freshmen. High school graduates who have completed less than one year of college work (fewer than 39 quarter credits or 26 semester credits) also enter as freshmen. Freshmen are admitted for fall and winter quarters only. All freshman applicants are considered for admission on the basis of high school rank, satisfaction of preparation requirements (see below), any college courses and grades, choice of major program, and scores on college entrance tests. Special requirements apply to students who wish to enter CLA to prepare for degree programs in the Carlson School of Management, the College of Education, the Institute of Technology, and other competitive programs.

Applicants from Minnesota, North Dakota, South Dakota, and Wisconsin seeking admission as freshmen must submit scores from the American College Testing Program (ACT). Applicants from other

states may submit scores from the Scholastic Aptitude Test of the College Board (SAT) or the ACT test. The ACT test should be taken during the junior year or the fall of the senior year, the SAT during the fall of the senior year. Test scores should be reported to the Office of Admissions, 240 Williamson Hall, University of Minnesota, 231 Pillsbury Drive S.E., Minneapolis, MN 55455.

High School Preparation Requirements—CLA encourages prospective students to complete a strong college preparatory program during their high school years. In grades 9-12, students planning to enter CLA must complete the following minimum preparation requirements:

1. Four years of English, with emphasis on writing and including instruction in reading and speaking skills and in literary understanding and appreciation;
 2. Two years of social studies, including U.S. history;
 3. Three years of mathematics, including one year each of elementary algebra, geometry, and intermediate algebra; four years of mathematics is highly recommended for science, engineering, architecture, and business and accounting;
 4. Three years of science, including one biological and one physical science (high school chemistry is required for enrollment in college chemistry courses);
 5. Two years of a single second language.
- In addition to the two-year University second language preparation requirement, CLA encourages prospective students to complete as much second language study as possible before enrolling in the college. See the section on the second language requirement for graduation from CLA.

Students with superior records may be considered for admission with deficiencies in one or more of the preparation areas, but they will be required to make up those deficiencies before they graduate from the University.

A strong pattern of college preparatory coursework throughout high school may enhance students' admissibility. Students who do not continue such a pattern of

coursework through grade 12 may compromise their chances of admission, particularly if they are in the "special review" category.

In addition to the preparation requirements, the basic criterion for admission has been an index that combines high school rank percentile and standardized test scores (the college is considering replacing this index with a new set of criteria). In fall 1991, 90% of CLA freshmen had high school rank percentiles of 66 or higher. The mean ACT composite scores was 25. The mean SAT verbal score was 495 and mean SAT math score was 560. Please note that applicants are not guaranteed admission even if they match or exceed some or all of these score levels.

Tuition Deposit—If you are admitted to a Twin Cities college as a freshman, you must submit a nonrefundable \$50 tuition deposit, to be applied to your first quarter's tuition. The tuition deposit deadlines are May 1 for fall quarter, November 1 for winter, and February 1 for spring. You must pay the deposit by the deadline stipulated in your admission notification letter. If you do not submit the deposit by the deadline, your admission may be delayed to a later quarter.

Advanced Placement (AP)—High school students may earn college credit in some subject areas by receiving satisfactory scores on the College Entrance and Examination Board Advanced Placement Program examinations offered in May.

International Baccalaureate (IB)—High school students may earn college credit in some subject areas by receiving acceptable scores on higher-level International Baccalaureate examinations.

Admission Before High School Graduation

Qualified high school students sometimes begin college work before high school graduation. The most common types of enrollment are:

Post-Secondary Enrollment Options

Act—Allows eligible juniors and seniors in Minnesota public high schools to register in University coursework with tuition and books paid for by the State Department of Education. Earned credits may be used to fulfill high school graduation requirements as well as college credit. Interested students should contact the Advanced High School Students Services Office, 337 Nolte Center, 315 Pillsbury Drive S.E., Minneapolis, MN, 55455 (612/626-1666).

Early Admission—Outstanding students who have not completed high school may be considered for admission after completion of the junior year of high school. Thorough interviews and testing and recommendations from high school principals, counselors, and parents are taken into account. The deadline for early admission applications is June 1.

Summer Session Registration—Students with strong academic records and the recommendation of their high school counselors may apply for registration in the summer between their sophomore and junior, and junior and senior years. Students who complete their sophomore year in the top 5% of their class and students who complete the junior year in the top 20% of their class may qualify for the Summer Honors College.

Older, Non-High School Graduates—Older students who have not completed high school but wish to complete CLA degrees may be considered on the basis of General Education Development (GED) test scores.

Planning to Transfer?

Minnesota's public colleges and universities are working to make transfer easier. You can help if you PLAN AHEAD, ASK QUESTIONS, and USE PATHWAYS created by transfer agreements.

Preparing for Transfer

If you are currently enrolled in a college or university:

The College and Its Procedures

- Discuss your plans with CLA's transfer specialist Melissa Burns, 49 Johnston Hall.
- Call or visit your intended transfer college. You should obtain the following materials and information:

- college catalog

- transfer brochure

- information on admissions criteria and on materials required for admission (e.g., portfolio, transcripts, test scores). Note that some majors have limited enrollments or their own special requirements such as a higher grade point average.

- information on financial aid (how to apply and by what date)

- After you have reviewed these materials, make an appointment to talk with an adviser/counselor in the college or program you want to enter. Be sure to ask about course transfer and admission criteria.

If you are not currently enrolled in a college or university, you might begin by meeting with a transfer specialist or an admission officer at your intended transfer college to plan the steps you need to take.

Understanding How Transfer of Credit Works

- The receiving college or university decides what credits transfer and whether those credits meet its degree requirements. The accreditation of both your sending and your receiving institution can affect the transfer of the credits you earn.
- Institutions accept credits from courses and programs like those they offer. They look for similarity in course goals, content, and level. "Like" transfers to "like."
- Not everything that transfers will help you graduate. Baccalaureate degree programs usually count credits in three categories: general education, major/minor courses and prerequisites, and electives. The key question is, "Will your credits fulfill requirements of the degree or program you choose?"

- If you change your career goal or major, you might not be able to complete all degree requirements within the usual number of graduation credits.

Applying for Transfer Admission

- Application for admission is always the first step in transferring. Fill out the application as early as you can prior to the deadline. Enclose the application fee.
- Request that official transcripts be sent from every institution you have attended. You might be required to provide a high school transcript or GED test scores as well.
- Recheck to be certain you supplied the college or university with all the necessary paperwork. Most colleges make no decisions until all required documents are in your file.
- If you have heard nothing from your intended college of transfer after one month, call to check on the status of your application.
- After the college notifies you that you have been accepted for admission, your transcripted credits will be evaluated for transfer. A written evaluation should tell you which courses transfer and which do not. How your courses specifically meet degree requirements may not be decided until you arrive for orientation or have chosen a major.

- If you have questions about your evaluation, call the Office of Admissions and ask to speak with a credit evaluator. Ask why judgments were made about specific courses. Many concerns can be cleared up if you understand why decisions were made. If not satisfied, you can appeal. See "Your Rights as a Transfer Student" below.

Your Rights as a Transfer Student

- A clear, understandable statement of an institution's transfer policy.
- A fair credit review and an explanation of why credits were or were not accepted.
- A copy of the formal appeals process.

Usual appeals steps are: 1) Student fills out an appeals form. Supplemental information you provide to reviewers—a syllabus, course description, or reading list—can help. 2) Department or committee will review. 3) Student receives, in writing, the outcome of the appeal. 4) Student can appeal decision to the CLA Admissions and Prospective Student Services Office, 49 Johnston Hall.

- At your request, a review of your eligibility for financial aid or scholarships.

For help with your transfer questions or problems, see your campus transfer specialist.

Transfer/Advanced Standing Admission

If you have completed a year or more of college work (39 quarter credits or 26 semester credits), you are considered for admission with advanced standing. Applicants with fewer credits are subject to freshman application procedures and admission requirements. All transfer admissions are subject to enrollment limits.

In addition to credit totals and enrollment limits, applicants for transfer with advanced standing are considered for admission on the basis of cumulative and recent grade point average (GPA), the completion rate for college work attempted, the choice of major, satisfaction of distribution requirements, and the previous college attended. Transfer students are usually admitted if they have a 2.50 cumulative GPA. Some majors and pre-professional programs have higher GPA and course prerequisite requirements. Applicants with a GPA between 2.20 and 2.49 are subject to a special review before an admission decision is made. Applicants with 60 or more credits and no declared major may also be subject to a special review. Applicants for pre-professional programs may have to satisfy additional requirements.

Preparation Requirements—Beginning fall quarter 1993, all transfer applicants must demonstrate that they have satisfied the high

school preparation requirements in order to be admitted to CLA. Please see the section on high school preparation requirements above.

General College Transfer—Students from the General College (GC) on the Twin Cities campus of the University of Minnesota are considered for transfer to CLA on the basis of the GC-CLA Transfer Guidelines. Copies of these guidelines are available from the CLA Prospective Student Office in 49 Johnston Hall and from the GC Advising Office in 41 Appleby Hall.

Minnesota Community College-CLA Transfer Agreement—A special transfer agreement subject to review and renewal exists between the College of Liberal Arts and the Minnesota Community Colleges. Specifically, the agreement provides that community college students who meet CLA freshman admission requirements will be able to enter upper division CLA programs on the same basis as those who completed lower division studies in CLA if they:

1. earn at least 90 transferable credits, 75 of which are from a Minnesota community college;
2. maintain at least a 2.20 GPA overall and a satisfactory rate of course completion;
3. meet appropriate application deadlines.

CLA will make available courses not offered at community colleges by establishing a special admission status for students entering community colleges who meet CLA freshman admissions criteria and who maintain an overall GPA of 2.20. Community college students who enroll concurrently through CLA will consider the community college their home campus for financial aid purposes. For more information, contact the transfer specialist at your community college.

A.A. Transfer Agreement—Students who completed an associate in arts degree from a Minnesota community college in fall 1986 or later will thereby satisfy the following liberal education requirements in CLA: Freshman composition and Groups A, B, C, and D.

Non-Certified Community College

Transfer—Community college students who do not meet CLA freshman admission requirements will be considered for transfer admission on the same basis as other transfer students (see above).

Transfer of Credit—CLA normally accepts for degree work all liberal arts courses completed at regionally accredited colleges with grades of A, B, C, or equivalent. No more than 12 credits from courses completed with grades of D will count toward the total required for graduation, though beyond this limit some of these courses may meet other graduation requirements (see Use of D Grades in this section). Credits earned through standardized testing programs (such as CLEP; see Examination-for-Credit Programs in this section) are accepted if the scores meet CLA standards. You may apply a limited number of credits from liberal arts courses from University colleges other than CLA; you may apply a limited number of credits from college-level courses in technical and professional disciplines (see General Credit Requirements in this section) toward your CLA degree. No credits, however, are awarded for vocational-technical courses.

Evaluations of transfer credits are initially made in the Office of Admissions, 240 Williamson Hall (612/625-2008). Address questions to this office.

National Student Exchange Program—

The University of Minnesota is a member of the National Student Exchange (NSE) program, which sponsors student exchanges between participating institutions of higher learning. Exchange students usually have highly specific educational goals. For information on the program, please contact NSE Coordinator, Office for Special Learning Opportunities, 220 Johnston Hall, 101 Pleasant Street S.E., Minneapolis, MN 55455 (612/624-7577).

Honors Program Admission

For admission to the Honors Program, you also must be admitted to CLA through the regular application procedure described for new freshmen or new transfer students. You may be admitted to the Honors Program when you first enroll in the college, or you may transfer to the program at any time up to the first quarter of your senior year. The criteria for admission depend on the number of degree credits you have earned. New freshmen are admitted on the basis of high school rank, standardized test scores, and an essay application. Entering freshmen should apply as early as possible and no later than July 1. Premajor students (1-74 completed degree credits) are admitted if they have earned A grades in at least 50% of their accumulated course credits. Students with 75 or more completed degree credits are admitted if they have earned A grades in at least 50% of their accumulated course credits and if they have been endorsed by the honors faculty representative in their major department. Transfer students may be admitted when they enter CLA if they have earned A grades in at least 50% of their transferred credits. Applications from CLA and transfer students are accepted throughout the year.

The special opportunities offered by the program are described under the heading Honors Program in the Special Learning Opportunities listing in this section. For information about application procedures, consult the Director of Honors, 115 Johnston Hall, University of Minnesota, 101 Pleasant Street S.E., Minneapolis, MN 55455 (612/624-5522).

Martin Luther King Program Admission

For admission to the Martin Luther King (MLK) Program, you must be admitted to CLA through the regular application procedures described for new freshmen or new transfer students. You should indicate interest in the MLK Program on your

application form. If you are currently enrolled or a returning student, information regarding the MLK Program may be obtained in 19 Johnston Hall (612/625-2300).

Adult Special Admission/ Postbaccalaureate Admission

You may be eligible for adult special status if you have earned a bachelor's degree from CLA and wish to enroll in courses that will not count toward a degree. If you are a CLA graduate who wishes to return to complete an additional degree, major, or minor or prepare for admission to a professional program, you will be readmitted as a degree-seeking student, not as an adult special student. When you seek readmission, you will be asked to complete a CLA Registration Status Clarification form to determine if you are an adult special or a degree-seeking student. For more information, contact the CLA Admissions and Prospective Student Services Office, 49 Johnston Hall (612/624-4110).

If you are not a CLA graduate and wish to enroll in courses for personal interest or to prepare for admission to graduate or professional school, you may wish to consider enrolling through Extension. The joint/day registration option makes many day school courses available to Extension students. For more information, contact Continuing Education and Extension, 101 Westbrook Hall, 77 Pleasant Street S.E., Minneapolis, MN 55455 (612/625-3333).

If you received a bachelor's degree from another college or university and wish to earn a bachelor's degree from CLA, you should seek admission to CLA as an advanced standing transfer student. See the section on transfer admission for more information. If you wish to enroll in CLA to complete requirements for admission to professional programs, you should seek admission as an advanced standing transfer student.

Advising services for CLA adult special students are available in 114 Johnston Hall (612/624-4545). Advisers aid in planning programs to suit students' outside demands and in selecting coursework to take fullest advantage of the college's resources.

Most adult special students register for part-time study, though full-time enrollment is not prohibited. Credits earned as an adult special student may later, upon admission to a degree program, be applied toward the bachelor's degree. Some colleges, including the Graduate School, limit the number of credits taken as an adult special that can be transferred to a degree program. Check with your program director.

Although 8xxx courses normally are restricted to graduate students, adult special students occasionally may obtain permission to enroll in them; approval of the instructor and the Graduate School are required.

CLA graduates who have not registered in another University of Minnesota college, excluding Extension, should go to the Office of Admissions, 240 Williamson Hall, and complete a readmission form. Returning graduates must also complete a CLA Registration Status Clarification form in 49 Johnston Hall.

CLA graduates who have registered in another University of Minnesota college, excluding Extension, must complete an Application for Change of College or Status. Applications should be submitted by the following deadlines: fall quarter—June 1; winter quarter—October 15; and spring quarter—January 15. Applications should be submitted to the Office of the Registrar, 150 Williamson Hall.

Student Information

Students who have questions about college procedures between the time they are admitted and when they enroll should contact the CLA Student Information Office, 214 Johnston Hall (612/625-2020).

Orientation

New students are required to participate in a CLA orientation program before their first quarter of enrollment. College faculty and staff, together with staff from the University's New Student Programs Office, introduce you to the resources and services of the University and college. College advisers meet with you in groups and individually to explain degree requirements, answer questions, and work out your initial registration for courses. Orientations are usually scheduled during the month before the start of the quarter for which you are admitted.

As a new student, you will receive your scheduled orientation date by mail, along with a variety of planning information. Before you come to campus, use this information to do some preparation. Identify various majors that interest you, clarify your goals for the first quarter, and consider which on-campus activities you may want to be involved in. When you come to campus you will receive a *CLA Orientation Handbook* or, if you are a transfer student with a declared major, you will receive a *CLA Graduation Handbook*. Both handbooks contain details about registration, course selection, transfer of credits, and college services; these handbooks are to be used in conjunction with the *CLA Bulletin*.

Registration

Registration is the process of signing up for the courses to be taken during the coming quarter. For fall classes, registration periods ordinarily begin in late May (for continuing students) and in mid-August (for new students), for winter classes in mid-November (mid-December for new students), for spring classes in mid-February (late March for new students), and for the two summer terms in mid-May and mid-July.

Full CLA registration instructions appear in the *Class Schedule*, which is issued each quarter.

Your Responsibility for Registration

You are responsible for your own course registration. Take care not to enroll in courses for which you are not prepared or that repeat work already completed. The course descriptions list prerequisites; instructors will also discuss requisite preparation with you. Students transferring credits from outside the University or taking non-liberal arts courses should be especially careful not to take courses that may repeat previous coursework. Course listings in the Major Requirements and Course Descriptions section of the bulletin show most equivalent CLA courses but may not indicate other University of Minnesota college courses that may duplicate CLA courses. An instructor may require you to cancel a course if you are inadequately prepared or inappropriately registered.

If you determine that your enrollment in a course is inappropriate, you should cancel the course through the Registration Center as quickly as possible. Course cancellations are allowed through the Friday of the sixth week of classes. After the sixth week, course cancellations are seldom allowed. (See Changes of Registration—Cancel-Add Procedure later in this section.)

Registration—Where to Start

Students new to the University, both first-year and transfer students from other institutions, receive orientation/registration information by mail. You will be given other materials and instructions when you come to campus for the required orientation/registration program. Students admitted to CLA lacking one or more of the University's high school preparation requirements should take courses to satisfy that deficiency in their first quarter in the college or as soon as possible thereafter. All preparation deficiencies should be completed by the time a student completes 90 credits.

Students from other University of Minnesota colleges apply for authorization to change colleges at the Student Relations Office, 150 Williamson Hall, or at corresponding offices on other University campuses. Instructions for your initial registration in the college will be mailed with a letter notifying you of admission to CLA. All students transferring from other University of Minnesota colleges must attend a college meeting before registering in CLA.

Continuing students should receive registration information on their Registration Status Notice every quarter, or they may call the CLA Student Information Office at 612/625-2020 or their college advising office to find out where to obtain materials. Distribution begins four days before registration periods open.

Students returning to CLA after an absence should contact the Student Information, 214 Johnston Hall, at least 12 weeks before the term they wish to return. Students suspended by the college must receive permission to return from the Committee on Student Scholastic Standing. Students who have not received an approved Leave of Absence from the college may be required to reapply for admission. Students who have taken courses elsewhere since their last registration in CLA must submit to the Office of Admissions, 240 Williamson Hall, official transcripts from those colleges.

Senior citizens who are Minnesota residents 62 or older may register for CLA classes, tuition-free, when space is available after all tuition-paying students have been accommodated. You must apply to instructors after classes have had their first meetings and register in 202 Fraser Hall if permission is granted. You usually must meet course prerequisites. If you are taking a course as an auditor (without credit), you pay no fees unless materials or other special charges are involved. If you are seeking credit, you pay a \$6 fee per credit as well as any special costs. Further information is available in 150 Williamson Hall (612/625-5333).

Limits on Registration

Planning Credit Load—To graduate in four years without going to summer school, you must average 15 credits per quarter. Dropping below that average on a consistent basis can add an extra year to the time you must spend in school. Financial aid for full-time students requires that you take at least 12 credits per quarter. Beginning in September 1992, the Minnesota State Grant Program will require 15 credits per quarter for full-time status. University policy states that you should expect to spend at least three hours per week per credit to do satisfactory work. This means you must plan at least 45 hours per week for 15 credits. Enrollment for more than 19 credits per quarter requires Student Scholastic Standing Committee approval. Exceptions may be granted if you have an superior academic record. Studies show that students who are able to put the most time into their college education do the best and get the most from it. If that is not possible, make realistic choices enabling you to succeed in courses and make steady progress.

Non-CLA and Non-Liberal Arts Credits—Courses offered by departments listed in the second section of this bulletin carry CLA credit as indicated. You may enroll in some courses offered by other University colleges. Liberal arts courses from other University colleges ("non-CLA liberal arts courses") may be applied toward general education requirements, but not toward the 45-credit CLA residency requirement or toward major requirements (see General Credit Requirements in this section). Approved college-level courses in technical or professional fields ("non-liberal arts courses") up to a maximum of 28 credits may be applied as electives toward your degree, but may not be applied toward general education, major, or residency requirements. Note that not all non-liberal arts courses are approved for credit. To find out if a non-liberal arts course is approved for CLA credit, consult with your

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college advising office before registering. See Advising in this section for a list of CLA advising offices.

Repeating Courses—Credit will not be awarded twice for the same course or for two substantially equivalent courses. You may repeat up to four courses, once each, in which you have received a D, F, N, or I. Both grades earned will appear on your official transcript and will affect the GPA (if a D or F), though graduation credit will be awarded only once. You do not earn credit if you repeat a course that you have already completed satisfactorily or if you repeat any course more than once. You also may repeat for credit and without limit any course from which you have officially withdrawn. You may not receive credit for a course that you have audited previously.

Credit for Prerequisite Courses—Credit normally will not be granted for a course that is a prerequisite to one for which credit has been received.

Students with previous second language learning should begin college study at the highest level their ability permits. Those who begin and successfully complete a CLA second language course at the second-quarter level or above with a grade of C or better will be awarded credit for lower level prerequisite courses upon request.

Repetition of High School Work—In CLA, you normally enroll for mathematics and second language courses for which high school work and the language proficiency test make you eligible. If you think you are not prepared to continue at such a level, consult your college office adviser about appropriate course selection.

Second language credit may be earned through special examination or by completing a higher level course. Students should consult their college office about testing for credit.

Audited Courses—With instructor permission, enrollment without credit is open to those who register as auditors or visitors. You may participate in classroom and other

activities and take examinations with the instructor's consent. No credit is awarded and no grade assigned. The course credits count in your quarterly tuition credit total and the regular course fee is assessed. Audited courses may not be taken later for credit. The courses appear on your grade record with the symbol V.

Limits on Informal Attendance—Under college rules, instructors are asked to exclude from classes anyone who is not registered. Limited unregistered attendance is permitted, however, during the first several meetings of a class if you are seeking information about the nature of the course. Occasional, but not regular, visiting may be permitted by an instructor later in a quarter. Unregistered students who submit course-work will be charged tuition for their attendance, and audit registration status will be assigned to reflect instruction received.

Continuing Education and Extension—If you are considering enrollment in evening courses or Extension Independent Study courses, you should take into account the demands on your time from both your day school course load and any outside employment. You also should check to see if Extension credits count toward financial aid credit minimums.

Effective summer session II 1989, Extension registrations, including independent study, are automatically entered on your day school transcript. All Extension registrations are added to the day school transcript, no matter when the last Extension registration occurred. If you have registered for an Extension course summer session II 1989 or later and have prior Extension courses, they will be added to your day school transcript.

Credits in Graduate School—If you lack no more than 9 credits of the 180 required for a bachelor's degree, you may apply for admission to the Graduate School. During your first quarter in the Graduate School, you would normally complete the credits necessary for your bachelor's degree. Graduate-level work applied to your

graduate degree may not also be applied toward your bachelor's degree. For limits on adult special registration in graduate courses, see Nondegree and Part-Time Status—Adult Special Admission in this section.

Changes of Registration—Cancel-Add Procedure

After registering, you may add courses, change course sections, or change your grade option or course level through the Friday of the second week of the quarter. Course cancellations may be made through the Friday of the sixth week of the quarter.

You are responsible for completing courses for which you have registered unless you officially cancel them at the Registration Center, 202 Fraser Hall.

Procedures for changes in registration and information on refunds are detailed in the *Class Schedule*.

Limits on Cancel-Adding—*All changes in registration must be processed through the Registration Center, 202 Fraser Hall.*

Course entry after the Friday of the first week of the term requires written permission from the instructor, and all registrations, section changes, and course additions must be completed by the Friday of the second week of the term. After the Friday of the second week, students must petition the Student Scholastic Standing Committee for permission to add a class. Permission to add a class after the deadline is not routinely approved. Therefore, if you cancel a course after the end of the second week of the quarter, you will probably not be able to replace it to maintain a full schedule for the term.

You may cancel one or more courses at your discretion through Friday of the sixth week of the term. It is your responsibility to use this period to evaluate the appropriateness of your registration, course placement, and workload, and to make final decisions about whether to cancel or complete your course by this deadline. By remaining registered for a class after the end of the

sixth week, you have committed yourself to complete the course, except under the circumstances noted under "Late Cancellation Policy" below. *All cancellations must be processed through the Registration Center, 202 Fraser Hall. If you do not attend a class or stop attending without officially canceling, you will receive a grade of F or N in the course and will remain responsible for course tuition.*

Limits on Changing Grade Base—

Instructors may assign grades only for the system under which the student is registered, A-B-C-D-F or S-N (see Credit and Grade Standards). Changes between the grading systems can be made only by canceling the original registration and adding the registration under the new grade base. Change of grade base cancel-adds are permitted only through the Friday of the second week of each quarter. Because choice of a grading system is a contract with the instructor and the college, the Student Scholastic Standing Committee strictly enforces this deadline.

Limits on Changing Course Level—

Changes between course levels (e.g., from 1xxx to 3xxx or 5xxx to 3xxx) can be made only by canceling the original registration and adding that registration to the new course level. Changes of course level are permitted only through the Friday of the second week of the quarter.

Late Cancellation Policy—CLA students may receive one discretionary course cancellation after the sixth-week deadline but before study day (and before any final examination and before final grades are issued). This discretionary cancel may be used only once during a student's enrollment in CLA. Further cancellations will be approved by the Student Scholastic Standing Committee only when verified extenuating circumstances that prevent a student from completing a course arise after the sixth week. Any cancellation, discretionary or otherwise, after the sixth week must be petitioned in the student's college advising office.

Financial Aid and Course Cancellation—

If you cancel a course or courses during the first two weeks of a quarter causing your registration to fall below the number of credits for which you are receiving financial aid (12 credits for full-time student status, 15 credits for Minnesota financial aid), you will be required to repay the Office of Student Financial Aid. If you cancel a course or courses after the second week of a quarter, a W will appear next to the course. The credits for the canceled course will still apply to your quarterly credit total. Veterans receiving GI benefits must repay the Veterans Administration. Repayment is calculated according to the date on which your cancellation is effective. Consult the Office of Student Financial Aid, 210 Fraser Hall (612/624-1665), to discuss your situation.

Leaving College—To leave the University during a quarter, you must cancel all courses for which you are registered. Complete (“exit”) cancellation can be processed through the last day of classes (or through Study Day, if it is a weekday). A CLA student who plans to withdraw from all courses for a quarter or not register for a subsequent quarter, whether to leave the college permanently or to take a temporary leave of absence, must submit to their college office a Leave of Absence and Noncontinuation Form. A student who withdraws without receiving an approved leave of absence may be required to reapply for admission. Information about these procedures is available in college advising offices and the CLA Student Information Office, 214 Johnston Hall (612/625-2020).

CLA Advising Offices

Your college records are kept in your assigned advising office; this office provides advising services and procedural information. The offices are:

Premajor Advising (for first-year students, preprofessional students, and those who have not yet declared majors)

105 Johnston Hall (612/624-9077)—Coordinator of Premajor Advising

30 Johnston Hall (612/624-9006)—health sciences, mathematics, biological and physical science premajors; students exploring majors in health sciences and science/technology areas

B-18 Johnston Hall (612/624-9585)—social sciences, humanities, and fine arts premajors; preprofessional students interested in management and education; students exploring social science, humanities, and fine arts majors

Upper Division College Offices (for sophomores, juniors, and seniors who have chosen majors, and designated special programs)

East Bank Majors—114 Johnston Hall (612/624-4545)

West Bank Majors—122 Social Sciences Building (612/624-5848)

Advising for Special Programs

Adult Special: Nondegree Students—114 Johnston Hall (612/624-4545)

Honors Program—115 Johnston Hall (612/624-5522)

Martin Luther King Program—19 Johnston Hall (612/625-2300)

The college's administrative offices are located on the first and second floors of Johnston Hall. The Student Intermediary Board, a CLA student organization, is located in 101 Johnston Hall (612/626-0348).

Reentry after an Absence—Students who wish to return after an absence should contact the CLA Student Information Office, 214 Johnston Hall, at least 12 weeks before the term they wish to return for information. Students in good academic standing may return freely within the terms of an approved leave of absence. Students without an approved leave of absence may be required to reapply for admission to the college.

Students returning after an absence of two or more years may be required to complete the degree requirements in effect at the time of their return unless they had completed 75 credits or more at the time of their last registration in the college. See "Degree Requirements after an Absence" for more information.

Advising

College advisers in academic departments and "college offices" offer you individual help in planning your studies and meeting other concerns you might have about college life. First-year and other students who have not selected or qualified for majors as well as students in special programs are each assigned to an advising office (see the directory below) for assistance with course selection, registration, vocational and personal decisions, financial problems, and involvement in campus activities. First-year students are required to meet with their adviser each quarter. After choosing a major and attaining sophomore standing, you are assigned two advisers: one in your major department (whom you usually retain until graduation); and one in your college office who has access to your college records, which move with you from your premajor college office to the appropriate upper division college office.

Wise use of the advising system can make your college experience more satisfying and productive. Take pertinent records and materials to adviser appointments, and prepare for program planning sessions by giving careful thought to possible course selections, program schedules, and your short- and long-term education and career goals.

Enrichment Opportunities

Honors Opportunities

(115 Johnston Hall, 612/624-5522)

The CLA Honors Program offers special educational opportunities to intellectually promising and highly motivated students. Its purpose is to broaden the scope of student learning, encourage full use of student potential, and recognize student accomplishments. Among its offerings are honors courses, small discussion groups for freshmen and sophomores, seminars for juniors and seniors, special advisers, departmental honors plans, and opportunities for advanced research and individual study. Most honors opportunities are available to you if you qualify, whether or not you are enrolled in the Honors Program.

Graduation with Honors—Enrollment in the Honors Program is required for graduation with the traditional honors designations *cum laude*, *magna cum laude*, and *summa cum laude*. Other graduation criteria include University of Minnesota residence, quality of the grade record, participation in honors opportunities, in some instances fulfillment of requirements designated for the major field, and, for *summa cum laude*, an honors thesis. Some departments also require honors theses for *cum laude* and *magna cum laude* degrees. Students must complete the honors requirements for their degree within two years of the quarter in which they apply for graduation.

Honors Courses—Honors courses or special honors sections of regular courses are often small in size and taught by selected teachers. Although grading standards are comparable to those of other courses, topics and materials are approached in greater depth than in regular classes. These courses are designated in the bulletin by the term "Honors Course" or by the letter "H" following the course number.

Honors Colloquia—These seminar-size discussion groups are led by faculty members or advanced graduate students. They are open to all University freshmen and sophomores. Topics change each quarter and vigorous student participation is the norm. Field trips and other special learning methods often characterize the colloquia. They carry credit, but because new topics and hours are selected each quarter, they are not listed in this bulletin. A list of topics is available in the Honors Program Office.

Honors Seminars—Honors seminars are open to students in the Honors Program who have completed 90 credits (other applicants are sometimes admitted when class space permits). In contrast to departmental honors course offerings, which emphasize depth of learning within fields, honors seminars are designed to serve the interests of students of high ability but with little background in the subject field. The seminars cover a wide range of topics, often of an interdisciplinary character, and deal with problems and ideas not treated in the regular curricular offerings of the college. Topics are specified in the *Class Schedule* and descriptions are available in the Honors Program Office.

Freshman-Sophomore Honors Program—Honors students who have earned fewer than 75 credits participate in a program that provides certain educational opportunities: special faculty advisers, special library loan privileges, and assistance by the Honors Program staff in making a variety of premajor decisions. There are honors opportunities both for students who will seek a CLA degree and for preprofessional students who will complete their degrees outside of CLA. Completion of at least two honors courses per year is strongly recommended for freshmen and sophomores. Students who complete four honors opportunities and earn A grades in at least 50% of their credits in their freshman and sophomore years receive a certificate and a notation on their transcript. Admission requirements are described under Honors Program Admission in this section.

Junior-Senior Honors Program—If you have completed 75 credits and have declared your major concentration, you may participate in the honors curriculum in your major field as well as in a variety of academic opportunities, including honors seminars. You are assisted in scholarship and fellowship matters, especially in preparation for graduate work, and have access to experienced counsel about graduate and professional study. When you undertake a research project, you are given special library privileges. Grants are available to help you meet project costs.

For admission to the honors program in the major, you usually must have earned grades of A in at least half of your credits, and you must be accepted for admission at least two quarters before graduation in order to graduate with honors.

Continuation in Honors—The academic progress of honors students is reviewed annually. Students whose grades fall below the level necessary to graduate with honors may be denied continuation in the program.

Departmental Honors Curricula—Most CLA departments provide special honors opportunities, for which students must meet special requirements. Information about these offerings as well as about graduation with honors may be obtained from department or program offices or from the honors office.

Honors Program Office—College records for honors students are kept in 115 Johnston Hall. The office also provides academic advising, procedural information, and other college office services to honors students.

Martin Luther King Program

(19 Johnston Hall, 612/625-2300)

The Martin Luther King Program is a premajor academic advising office for CLA students. Its mission is to provide high-quality advising, support services, and instruction. This is achieved through sponsoring tutorials, sections of introductory courses, support groups, computerized

instruction, study skills workshops, and career seminars. Students enrolled in the program are encouraged to maximize their potential through educationally enriching learning experiences.

Individually Designed Interdepartmental Major (IDIM)

You may want to consider the IDIM program if you wish to earn a B.A. by specializing in an interdisciplinary area rather than a department major. Because you must carefully plan your own 80-credit major, the IDIM program may require more initiative, thought, and effort from you than many traditional majors, but it offers an individualized education and close contact with faculty and staff advisers. Information about the IDIM program is in the Major Requirements and Course Descriptions section of this bulletin or can be obtained in 220 Johnston Hall (612/624-8006).

Bachelor of Individualized Studies (B.I.S.)

If you seek an even broader program of study than the IDIM (described above), you may wish to consider the B.I.S. degree. Although this program has much in common with the IDIM—student initiative in proposing courses, close contact with faculty advisers, highly individualized programs—it differs in permitting multiple educational objectives rather than a single theme or concentration, and in allowing more coursework outside the college, provided it is relevant to your objectives and approved by your advisers. You must have earned at least 39 credits before applying and must complete 60 credits following admission to the program. Further information is in the Major Requirements and Course Descriptions section of this bulletin or can be obtained in 220 Johnston Hall (612/624-8006).

Office for Special Learning Opportunities (OSLO)

Information about the college's special learning opportunities and assistance for students who wish to plan individualized study projects can be obtained in OSLO, 220 Johnston Hall (612/624-7577). Special learning opportunities include community service, field experience, internships, and domestic exchange programs. They are described below.

Alternative Credit Registration Options

Most departments offer opportunities for independent study of regular courses or of subjects not covered in the curriculum. For general information and forms, contact the OSLO office mentioned above. These opportunities for independent study, carried out under the direction of a faculty member, require instructor, department, and college approval on a special permission form. They include:

Y Registration—Enrollment in established courses in which you study on your own, without class attendance. You must meet course conditions for examinations and other work on which you and the instructor agree. Regular fees, deadlines, and grading policies apply.

X Registration—A way of earning up to three extra credits in a course you are taking or have previously taken, by exploring more deeply a topic related to the course's content.

Directed Studies (3970 or 5970)—An individual learning experience arranged by you and one or more University faculty members to explore subjects not covered by regular courses. You work independently in developing and carrying out a special study project. Credit assignments vary; normally, each credit earned requires 30 hours of academic work a quarter. Regular evaluation and grading procedures apply.

The College and Its Procedures

Directed Research (usually 3990 or 5990)—Guided research under conditions and procedures similar to those that govern directed studies.

Directed Instruction (3980)—An opportunity to learn more about a subject you have studied by assisting in teaching it to others. One to five credits per quarter may be earned through directed instruction; a maximum of eight credits may be applied toward a degree.

Interdepartmental Study (ID 3970)—Similar to directed studies except that the subject crosses departmental lines. Usually, you work with more than one instructor and need approval from each instructor and the OSLO office.

Field Experience Learning

Field experience learning is a form of study in which community resources are used to explore the questions and issues raised in the classroom. You work in a paid or volunteer position, usually in a location such as an art gallery, museum, social service agency, government office, business organization, or community program. The fieldwork (sometimes called an internship or practicum) takes place off campus, but the study is carried out under the direction of a University faculty member. Credit is earned through directed study, through X registration, or by enrolling in one of the special courses designated for field experience learning.

Domestic Exchange Program

Through the University's domestic exchange programs, it is possible to study for up to a year at other colleges and universities. The National Student Exchange program includes 100 public colleges, located in 45 states, Puerto Rico, the Virgin Islands, and Guam. The Traveling Scholars Program includes the Big Ten universities and the University of Chicago. Costs for both programs approximate University resident

tuition and fees. You must satisfy certain requirements in order to qualify for the programs. For information, see an adviser in the OSLO office listed above.

Foreign Study

CLA credit for study abroad may be earned through independent study or through a wide variety of formal programs. For details, see Foreign Study in the second section.

Examination-for-Credit Programs

Several opportunities to gain credit, exemption, or advanced placement are available: special examinations for credit, foreign language placement, advanced placement, and credit for competency based on armed services educational experiences. Information about examinations or credit for work validated through non-University standardized tests (e.g., College Level Examination Program examinations) is available in college or department offices.

Credits earned through examination may not be applied toward the 45 CLA credits required for a degree.

Special Examinations for Credit—If you believe your knowledge of a subject is equal to that required to complete a particular course, you may request to take an examination for credit. If Student Scholastic Standing Committee and department review of your application and background lead to approval, arrangements can be made with an appropriate instructor to take an examination. Usually no grade is assigned. A \$30 fee is assessed for each examination. To be eligible, students must have been admitted to a degree program and must have registered for at least one quarter in CLA. Consult an adviser in your college office about other limitations.

Special Examinations for Proficiency—To meet a prerequisite or satisfy a requirement, you may ask Student Scholastic Standing Committee permission to take an examination to demonstrate proficiency. No credit is

granted and no fee is charged. See page 312 (1986 Second Language Requirement) about examinations to demonstrate proficiency in languages other than English.

College Level Examination Program

(CLEP)—By passing one or more of the standardized general examinations prepared by the College Entrance Examination Board, you may, after initial registration, earn up to 32 credits without grades. Credits for college coursework or for other examinations previously completed in the subject matter will be subtracted from credit awards for CLEP examinations. CLEP also offers a number of subject examinations for credit. Information about CLEP tests can be obtained from college offices.

Credits, Grades, and Records

Credit and Grade Standards

Credit Value—A credit, by University Senate definition, is earned through “about three hours of academic work a week”—30 hours in a 10-week quarter. A 4-credit course typically represents 120 hours of acceptable work. The time may be spent in combinations of classroom, laboratory, library, off-campus, and home work.

Grades—University academic achievement is graded under two systems: A-F and S-N. Choice of grading system and course level (1xxx/3xxx/5xxx) is indicated on registration forms; changes may not be made after the Friday of the second week of the quarter. Some courses may be taken under only one system; limitations are identified in the course listings. Most departments require A-F registration in required major courses (consult your major department). University regulations prescribe the grades that will be reported on your transcript:

- A—Achievement that is *outstanding* relative to the level necessary to meet course requirements (4 grade points).
- B—Achievement *significantly* above the level necessary to meet course requirements (3 grade points).
- C—Achievement that *meets the basic course requirements in every respect* (2 grade points).
- D—Achievement *worthy of credit* even though it does not fully meet the basic course requirements in every respect (1 grade point).
- F—Performance that *fails to meet the basic course requirements* (0 grade points).
- S—Achievement *satisfactory* to the instructor for the program in which you are registered. This definition implies that the standards for S may vary from one program to another. The S is not figured into the GPA.
- N—*No credit*. Before fall 1986, this symbol was assigned to students not earning an S or at least a D on the A, B, C, D, N grade base. Its use is now restricted to students not earning an S on the S-N grade base.

Acceptance of S Grades by CLA—You must earn A-B-C grades for at least half of the CLA credits applied toward your degree (never fewer than 45). The other half may include S grades.

Acceptance of S Grades by Other

Colleges—Academic units other than CLA do not always accept courses in which S grades have been earned. The University of Minnesota Graduate School asks for written evaluations or letter grades for courses carrying S grades that bear on your proposed field of specialization, and may request additional information such as results of the Graduate Record Examination. It often is difficult to obtain redefinition of S grades in A-B-C-D terms. If you are contemplating professional or graduate work, you should consult college bulletins or an adviser about use of S-N grading.

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Use of D Grades—A maximum of 12 credits of D may be applied toward the 180-credit degree requirement. Courses with D grades may be used to fulfill general education requirements, prerequisites, or (with department approval) specific course requirements for the major. D credits in General College composition courses may not be used to satisfy the CLA Freshman Writing Practice requirement. (A grade of C+ [C-7] must be earned in GC 1422 or GC 3423 to satisfy this requirement.)

Additional Grading and Record Symbols—The University system uses several additional symbols:

I—*Incomplete*, a symbol temporarily assigned when the instructor 1) has a “reasonable expectation” that you can successfully complete unfinished work in a course no later than the end of the next quarter, and 2) believes legitimate reasons exist to justify extending the deadline for course completion. You and your instructor should arrive at a clear understanding, in advance, about whether you will receive an I and what the makeup work conditions will be. The instructor may set dates and conditions for makeup work. Forms for recording this information are available in college advising offices.

If a course is not completed as prescribed or not made up as agreed within the next quarter of registration, the I will lapse to an F if registered on the A-F grade base or an N if registered on the S-N grade base.

W—*Official withdrawal* from a course after the end of the second week of the quarter. You must file a course cancellation request before the end of the sixth week of the quarter to ensure that the W, rather than the F, will be formally entered on your record. (When cancellations are completed by the second week of the quarter, no course or grade information is recorded. A transcript memo records the date of a complete cancellation, or “exit.”)

V—Registration as a *visitor* or auditor that permits attendance and, with instructor permission, participation in course activities. No credit or grade is earned and a course in which a V has been posted may not subsequently be taken for credit. Regular attendance without registration is not authorized.

T—A grade *transferred* from another college or institution. Appears on the transcript immediately preceding the transferred grade.

X—*Continuation* in another course or courses is necessary because grades cannot be determined until the full sequence is completed. Instructors submit letter grades for each X upon completion of the sequence.

Grade Point Average—The grade point average (GPA) is computed by (1) multiplying the number of credits in each course by the corresponding grade points; (2) totaling the grade points earned; and (3) dividing the sum in (2) by the number of credits undertaken, excluding courses in which grades of S, X, or N or symbols of I, V, or W were awarded. Grades of F are included in credits attempted and are used in computing the grade point average. Transfer coursework is not included in the GPA on your University transcript.

Satisfactory Progress—You are expected to make satisfactory progress toward your degree. This usually means earning grades of A, B, C, or S in most courses and completing courses undertaken (see Scholastic Probation). If you are dissatisfied with your progress, early consultation with instructors and your adviser is recommended.

The Office of Student Financial Aid (OSFA) now bases its determination of satisfactory progress on the college’s progress standards. Consult OSFA (210 Fraser Hall) about your eligibility.

Dean's List—The Dean's List, posted quarterly in the second floor corridor of Johnston Hall, is a method by which the college recognizes superior academic performance. It has two divisions: for the "A" list (usually about 3% of CLA students), you must earn 12 credits of A and all other credits with A or S grades; for the "two-thirds A" list, you must complete 12 or more credits (at least 8 on A-F grading) with A grades in two-thirds of your A-F credits and all other credits with B or S grades. A "Dean's List" notation is entered on your transcript for each quarter that you meet these performance standards. If you believe you qualified for the Dean's List but are not listed, please consult with the staff in 106 Johnston Hall.

Student Grade Reports and Transcripts

Student academic records are maintained by the Office of the Registrar through a computerized system. These records show all coursework for which you were registered as of the end of the second week of each quarter and the grades and symbols awarded for that work. A transcript of your record will be mailed to you in July after the end of each academic year, but you may obtain a certified transcript for \$3 or an unofficial copy at no charge at the transcript service in the Office of the Registrar, 155 Williamson Hall. Also, official certified transcripts will be sent upon your written request, at a charge of \$3 per copy (\$9 for rush service), to whomever you designate. Telephone requests are not accepted. Grades for fall and winter quarters are available at the beginning of the succeeding quarters on transcripts that you must pick up from designated locations; they are not mailed. See the Official Daily Bulletin column in *The Minnesota Daily* or the *Class Schedule* for dates and places. Grades for spring quarter appear on the transcript mailed in July; summer session grades are mailed separately.

You may leave self-addressed postcards with your instructors to learn your grades sooner.

Retention of Student Records—Official transcripts are maintained permanently by the Office of the Registrar. The college retains for ten years the college files of upper division students who left CLA after earning 100 college credits; college files of students who applied for graduation but did not graduate and of students who had filed a degree program plan (senior summary or balance sheet) are kept indefinitely. Student records of graduates are kept for two years following graduation.

Students may insert materials in permanent recommendation files, which are kept in the Career Development Office.

Class Attendance, Grading, and Examination Procedures

Class Attendance—As a CLA student, you are responsible for attending class and for ascertaining the particular attendance requirements for each class or department. You should also learn each instructor's policies concerning makeup of work for absences. Instructors and students may consult the *CLA Classroom, Grading, and Examination Procedures Handbook* for more information on these policies.

Course Performance and Grading—Instructors establish ground rules for their courses in conformity with their department policies and are expected to explain them at the first course meeting. This includes announcement of office hours and location, the kind of help to be expected from the instructor and teaching assistants, and tutorial services, if available. The instructor also describes the general nature of the course, the work expected, dates for examinations and paper submissions, and expectations for classroom participation and attendance. Instructors determine the standards for grading in their classes and

will describe expectations, methods of evaluation, and factors that enter into grade determination. The special conditions under which an Incomplete (I) might be awarded also should be established.

The college does not permit you to submit extra work to raise your grade unless all students in the class are afforded the same opportunity.

Classroom Behavior—You are entitled to a good learning environment in the classroom. Students whose behavior is disruptive either to the instructor or to other students will be asked to leave.

Final Examinations—You are required to take final examinations at the scheduled times (see the *Class Schedule*). Under certain circumstances, however, you may request final examination schedule adjustment in your college office. Instructors are obligated to schedule makeup examinations within the final examination period for students who have three final examinations within a 16-hour period. Instructors also are encouraged to reschedule examinations for students with religious objections to taking an examination on a given day. You must submit your request for an adjustment in your schedule at least two weeks before the examination period begins. For assistance in resolving conflicts, call the CLA Student Information Office at 612/625-2020.

If you miss a final, an F or N is recorded. You must obtain the instructor's permission to make up the examination.

Final examinations may be rescheduled by the instructor only through the official procedure for that purpose (see the *Class Schedule*). Final examinations may not be scheduled for the last day of class or earlier or for Study Day. If an examination is rescheduled at the instructor's request, and you have an examination conflict because of it, you are entitled to be given the final examination at an alternative time within the regularly scheduled examination period for that quarter.

Probation, Suspension, Readmission

Scholastic Probation—The college determines your scholastic standing by evaluating whether you are making satisfactory progress toward your degree, rather than by your GPA. You are expected to complete 75% of the credits you attempt each academic year (first summer session through spring quarter) with grades of A, B, C, or S. The formula for determining this is:

$$\frac{\text{Credits graded A, B, C, S}}{\text{Credits graded A, B, C, S, D, F, N, I}} = \text{percentage of successful completion (min. 75\%)}$$

(Marks of W, V, and X are not included in this calculation. Extension credits are included in this calculation.)

If your percentage of successful completion is less than 75% but at least 50%, you will be put on scholastic probation—the signal your academic progress has not been satisfactory—along with an invitation to seek your adviser's help to resolve academic problems. The college attempts to notify students who fall below its minimum scholastic standards, but it is your responsibility to monitor your academic progress and to inquire at your college office if you have questions regarding your academic status.

If a heavy load of outside work, campus activity, or other distraction interferes with your academic achievement, you are expected to make immediate adjustments and seek whatever assistance is necessary.

You will be taken off probation when your academic work has improved enough to promise continuous progress toward the degree.

Suspension from CLA—Accumulation of substandard work will usually jeopardize your likelihood of graduating from CLA or of transferring to another institution. Because continuing in the college in this circumstance serves no useful purpose, you will be suspended from CLA in the following situations:

1. If you fail to earn successful grades in at least 50% of your credits for an academic year, you will be suspended from the college immediately.

2. If you are placed on scholastic probation and do not meet the terms of your probation, you will be suspended from the college.

The Student Scholastic Standing Committee decides in each case, on the basis of all the evidence, whether to suspend a student. Written appeals may be submitted by students who think additional information presented to the committee may modify the decision. Suspensions are usually rescinded only when the committee is convinced that changes in the student's academic performance are probable.

Readmission to the College—If you are suspended from the college, you may return only upon approval of the Student Scholastic Standing Committee. Dependable assurance that the factors leading to the suspension have been corrected, together with convincing prospects that improved work will follow, must be advanced to obtain approval. Readmitted students are usually placed on probation and may be subject to immediate suspension if work becomes unsatisfactory.

Petitions for readmission are normally considered only after an interval of at least one year.

Student Intermediary Board

(101 Johnston Hall, 612/626-0348)

The College of Liberal Arts Student Intermediary Board (CLA-SIB) is the CLA student governance body. The board is the official channel through which recommendations from the CLA student body are brought to the college.

CLA-SIB also represents students with seats on many committees and deals with nomination or election of students to seats on many others. These governing councils and committees collectively deal with virtually all aspects of CLA policy.

One primary responsibility of the CLA-SIB is to maintain contact with department student organizations.

All students are encouraged to participate in the operations of the board and to contribute to decisions affecting the college. The board is composed of elected and appointed members. The board recognizes and practices affirmative action.

Student Services

Scholastic Standing

The Student Scholastic Standing Committee, comprised of administrators and college office staff, is charged with interpreting and enforcing college and University regulations relating to academic affairs. It handles requests for exceptions to registration policies and procedures, admission standards, transfer of credit policies, and degree requirements. The committee administers the college's probation system, monitoring students' performance and dealing with questions of probation, suspension, and readmission.

The committee seeks to maintain the spirit of the college's regulations as flexibly as possible and is empowered to make exceptions in cases in which regulations work to your educational disadvantage.

You are urged to consult a committee representative in your college office concerning almost any kind of problem, but especially those that you think interfere with your ability to attain your academic objectives. Well-established petition and appeal procedures assure full review of your requests.

Scholastic Conduct

The college has broadly defined scholastic dishonesty as any act violating the rights of another student in academic work or involving misrepresentation of your own work. Scholastic dishonesty includes, but is not necessarily limited to, cheating on

assignments or examinations; plagiarizing, misrepresenting as your own work any part of work done by another; submitting the same work, or substantially similar works, to meet the requirements of more than one course without the approval and consent of all instructors concerned; depriving another student of necessary course materials; or interfering with another student's work.

The Student Scholastic Conduct Committee, composed of students and faculty, investigates charges of academic dishonesty referred to it by CLA faculty. When charges are upheld, the student may be placed on disciplinary probation, failed in a course, or suspended from the college.

CLA faculty may act on cases involving CLA students in their classes; such action may not exceed modification of a course grade. Instructors must report any action to the conduct committee, and the student will be informed of the right to ask for a committee hearing. Specific information on report and appeal procedures may be obtained by calling Student Academic Support Services (612/625-3846).

Disciplinary or conduct cases that are nonacademic in nature or that involve two or more colleges are referred to the Campus Committee on Student Behavior.

Grievance Procedures and Appeals

If you have complaints or criticism about the content of a course or the way the course is being conducted, you have recourse through grievance procedures. You are expected to confer first with the course instructor. If no satisfactory solution is reached, the complaint should be presented to the department, school, or program head. If these processes fail to reach a satisfactory resolution, further appeals go to college-level and University-level committees.

Staff advisers in the college offices are competent sources for interpretation of college procedures or regulations, and they often can suggest suitable alternatives when a problem is involved.

Other sources of assistance include the Student Ombuds Service (102 Johnston Hall), a student-fee supported service that helps students resolve problems, and the CLA Student Intermediary Board, the college's official student organization (101 Johnston Hall).

Financial Aid

(Office of Student Financial Aid, 210 Fraser Hall and 197 Coffey Hall, 612/624-1665)

Student financial aid is provided in the form of scholarships, grants, employment, and loans. Major sources of aid include: Pell Grants; Minnesota State Grants; Perkins Loans; Supplemental Educational Opportunity Grants; University scholarships, grants, and loans; College Work-Study and non-CWS employment; health professions funds; Stafford Student Loans; Supplemental Loans for Students; Parent Loans for Students; Student Educational Loan Fund (SELF); and the Alternative Loan Program (ALP).

Apply as soon as possible after January 1, the winter before the fall term for which you need aid, to be considered for most types of financial assistance. Most aid is awarded on the basis of financial need and the availability of funds. You may apply for financial aid before being admitted to the University. Complete the American College Testing Family Financial Statement (FFS) to apply for all types of aid, including Stafford Student Loans. Application materials and information are available from the Office of Student Financial Aid.

With the exception of College Work-Study, you do not need to be eligible for financial aid to secure student employment. Part-time work, either on or off campus, is available through the Student Employment Center, 120 Fraser Hall (612/624-8070). To be eligible for these services, you must be a registered student and have paid tuition and fees for at least six credits, except during summer. Temporary employment also is available through the center's Student Temporary Service (612/624-5554).

Services for Disabled Students

The University's mission is to provide optimal educational opportunities for all students including those with physical, sensory, learning, and/or psychological disabilities. The University recognizes that disabled students sometimes have unique needs that must be met for them to have access to campus programs and facilities. In general, University policy calls for accommodations to be made on an individualized and flexible basis. It is the responsibility of students to seek assistance at the University and to make their needs known.

One of the first places to seek assistance is the Office for Students With Disabilities (OSD). This office is provided by the University of Minnesota to promote program and physical access, which means ensuring the rights of disabled students and assisting the University in meeting its obligations under Federal and State statutes. OSD provides direct assistance such as information, referral, advocacy, support, and academic accommodations (i.e., interpreters, readers, etc.) for enrolled and prospective students, as well as consultation to faculty and staff to ensure access to their programs and facilities. The office will also assist disabled students in obtaining services from other University or community resources. For more information contact: the Office for Students With Disabilities, 16 Johnston Hall, 624-4037 (Voice or TDD).

Career Development Office

(345 Fraser Hall, 612/624-7505)

The CLA Career Development Office helps undergraduate and graduate students as well as alumni of the college to relate academic interests to career options, identify career goals, and learn effective job hunting skills. The following services and materials are provided:

- individual career counseling
- job hunting workshops
- career exploration programs
- career decision-making course
- life/career planning course
- career library with reference materials on a variety of occupational areas and specific employer information
- community resource directory for information interviews
- on-campus interviews with prospective employers and graduate school representatives
- job vacancy listings and a resume referral service
- graduate and professional school reference files
- prelaw advising
- graduate/professional school programs

You are encouraged to use the services of the office and the resources in the career library throughout your college career. Early planning is highly recommended.

University Services

A wide range of personal and community services are open to all University students. A Directory of Services in the opening pages of the *Student/Staff Directory* lists many of them. They include personal and emotional counseling, as well as and health, employment, housing, financial aid, and emergency services.

Frequently consulted sources of aid and information include the following (area code 612):

African American Learning Resource Center—323 Walter Library (625-1363)

American Indian Learning Resource Center—125 Fraser Hall (624-2555)

Asian/Pacific American Learning Resource Center—306 Walter Library (624-2317)

Career Development—345 Fraser Hall (624-7505)

Chicano/Latino Learning Resource Center—332 Walter Library (625-6013)

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Correspondence Study—Continuing Education and Extension, 45 Wesbrook Hall (624-0000)

Disabled Student Assistance—Office for Students with Disabilities, 16 Johnston Hall (624-4037, voice or TDD)

Evening Classes—Continuing Education and Extension, 101 Wesbrook Hall (625-3333)

Financial Aid—Office of Student Financial Aid, 210 Fraser Hall (624-1665)

Foreign Student Assistance—Office of International Education, 149 Nicholson Hall (624-5580)

Health Service—Boynton Health Service, 410 Church Street S.E. (625-8400)

Housing—Comstock Hall East (624-2994)

Minnesota Women's Center—5 Eddy Hall (624-3323)

Parking—216 Printing and Graphic Arts (626-7275)

Personal and Vocational Counseling—University Counseling Services, 109 Eddy Hall (624-3323)

Religious Activities—Student Development (624-5101)

Student Activities—Coffman Information Center, 138 Coffman Memorial Union (625-4177)

Student Employment—120 Fraser Hall (624-8070)

Student Legal Service—160 West Bank Union Skyway (624-1001)

Student Ombuds Service (SOS)—102 Johnston Hall (626-0891)

Student Organizations—Student Organization Development Center, 340 Coffman Memorial Union (624-5101)

Study Skills Improvement—Learning and Academic Skills Center, 104 Eddy Hall (624-7546)

Transit Services—216 Printing and Graphic Arts, 2818 Como Avenue S.E. (625-9000)

Veterans Services—Admissions/Education Services, 155 Williamson Hall, Minneapolis (625-8076); Veterans Administration representative, Federal Building, Ft. Snelling (726-1454)

Major Requirements and Course Descriptions



Major Requirements and Course Descriptions

Course Numbering System

Course numbers in the University system indicate course level. The key:

- 0xxx No credit
- 1xxx Introductory level—primarily for freshmen and sophomores
- 3xxx Intermediate level—primarily for juniors and seniors, but open to sophomores with a C average overall and in prerequisites
- 5xxx Advanced level—open to juniors, seniors, and graduate students, and to third-quarter sophomores by Student Scholastic Standing Committee approval (arranged in college advising offices). May carry graduate credit for graduate students.
- 8xxx Graduate level—open only to students registered in the Graduate School. Not listed in this bulletin.
- xxx0 May be repeated for credit, if a CLA course (course numbers in other University divisions do not always follow this system).
- 3970 or 5970 Directed Studies courses
- 3980 or 5980 Directed Instruction courses
- 3990 or 5990 Directed Research courses

Symbols and Abbreviations

- Prefixes Two-, three-, or four-letter department designator (e.g., Engl for English)
- f,w,s,su Fall, winter, spring quarter, summer session
- Cr..... Credits per quarter; first number following course title
- 1011, 1012,
1013..... Series courses, separated by commas; may be entered any quarter
- 1011-1012-
1013..... Sequence courses, separated by hyphens; must be taken in order listed
- †..... Credit awarded only after all courses preceding symbol have been completed
- §..... Credit will not be granted if credit has been received for the course listed after this symbol
- ¶..... Course registration is required (or allowed) in the course listed after this symbol
- # Registration Override Permit, completed and signed by the instructor, is required for registration
- Δ Registration Override Permit, completed and signed by the unit offering the course, is required for registration
- Registration Override Permit, completed and signed by the college offering the course, is required for registration
- H Honors section of regular course
- , In prerequisite listings, comma means “and” (e.g., “prereq 1101, 1102 or 1103” means the prerequisites are 1101 and either 1102 or 1103)

Aerospace Studies

See Reserve Officers' Training Corps.

Afro-American and African Studies

Staff—*Chair*, John Taborn, 883 Social Sciences Building; *Directors of Undergraduate Studies*, Rose Brewer, Afro-American Studies, 874 Social Sciences Building, and Victoria Coifman, African Studies, 825 Social Sciences Building; *Director of African Studies Council*, Joanne Eicher, 240 McNeal Hall

Professors: Isaacman, Porter, Scott, Southall

Associate Professors: Brewer, McCurdy, Nimitz, Taborn, Wright

Assistant Professors: AshShareef, Coifman, Pike

The Afro-American and African studies major provides students with comprehensive knowledge and understanding of the Afro-American and African experience from a multidisciplinary perspective including history, political science, sociology, psychology, literature, music, and art. Courses and faculty are drawn from the department as well as from other units of the University. The program of study is based on the belief that the study of Afro-American and African peoples, both within Africa and throughout the Western Hemisphere, constitutes a distinct and interrelated area of study of the African Diaspora. Students may choose one of three curriculum tracks (Integrated Studies of African Peoples, Afro-American Studies, and African Studies), and within each track will select a concentration such as public policy-developmental studies, literature and the arts, or a more traditional disciplinary focus. Detailed requirements are contained in the *Student Handbook* of the department, which may be obtained from the department of Afro-American and African Studies, 808 Social Sciences Building, University of Minnesota, 267 19th Avenue, Minneapolis, MN 55455.

General Education—Afro-American and African Studies courses are designed for non-majors as well as majors. Most courses below 5xxx level are open to students with little or no previous work in the subject. In addition, most courses will meet either the college's world studies or cultural pluralism requirements.

Internship Opportunities—The department offers credit toward the major for internships with the Minnesota Studies in International Development in Africa, the Caribbean, and Latin America, as well as approved internships with local or other international organizations. Internships may be individually arranged by students, but in all cases arrangements for credit toward the major must be approved by the faculty undergraduate adviser. In some instances acceptance for internships is limited. Information about internships may be obtained from the Global Campus, OSLO, as well as the faculty adviser.

Study Abroad—The department strongly encourages students to incorporate foreign study into their program. Relevant opportunities include internships in Senegal, Kenya, Jamaica, Ecuador, and Morocco with MSID; student exchange programs in Nigeria, Togo, Kenya, Ivory Coast, and Tanzania with ISEP; and study programs in Tanzania and Tunisia with IRSEP. SPAN also has programs to relevant countries.

B.A. Major Sequence

Required Preparatory Courses—All students must complete 1011 and 1021.

Major Requirements—Completion of 50-54 3xxx-5xxx-level credits, to include a 3xxx- or 5xxx-level statistics or methods course approved by the undergraduate adviser; sequences in Afro-American history and/or African history, 28 credits in group concentration and breadth requirements; at least 4 credits from a course that examines gender issues; one 5xxx-level seminar or proseminar; and a senior paper. Students may receive a maximum of 8 credits toward the major for approved internships. Specific

Major Requirements and Course Descriptions

requirements vary depending on selected track. Consult the *Student Handbook* of the department of Afro-American and African Studies for details. Students selecting to major in Afro-American and African Studies must consult with the department's undergraduate adviser to establish an approved program.

Minor Requirements—24 3xxx-5xxx-level credits from one of the major tracks to include 8 credits in Afro-American and/or African history. No more than 4 credits may be from directed study, and no more than 4 credits may be taken S-N. The minor program must be approved by the faculty undergraduate adviser.

Afro-American Studies (Afro)

1011. INTRODUCTION TO AFRO-AMERICAN STUDIES. (4 cr) Staff

Materials and methods of Afro-American studies; topics such as the African background, the evolution of black society and popular culture, comparative race relations, black feminism and societal change, and economic development theories.

3025. BLACK AMERICANS: SOCIALIZATION, PERSONALITY, AND BEHAVIOR. (4 cr) Taborn

Development of the black psyche and of the black person and black culture.

3334. BLACK WOMEN. (4 cr) Brewer

The interdisciplinary study of the experience of black women in the United States, including economic, political, and social factors, psychosexual development, and familial roles.

3061. THE BLACK FAMILY. (4 cr) Brewer

Sociological view of the black family up to the present.

3072. RACISM: SOCIAL-PSYCHOLOGICAL CONSEQUENCES FOR BLACK AMERICANS. (4 cr, §5072) Taborn

Racism and its effects on black Americans; definitions, determinants, and dynamics. Examined in an experiential context to reflect individual and institutional racism in milieus of student interest.

3108. BLACK MUSIC: A HISTORY OF JAZZ. (4 cr)

Origins, growth, and development of jazz; economic and sociological factors that influenced its development.

3301. MUSIC OF BLACK AMERICANS. (4 cr) McCurdy

Historical development of music of black Americans, including spiritual, gospel, blues, soul, jazz, and classical; formal music education processes influential in creating black musical styles. Live performances by local black musicians.

3324. HISTORY OF SLAVERY IN THE UNITED STATES. (4 cr)

Interdisciplinary examination of the history of American slavery as a social, political, and economic system, with treatment of the major scholarly literature.

3543. PSYCHOLOGY AND THE BLACK AMERICAN EXPERIENCE. (4 cr; prereq 1025, Psy 1001 or #) Taborn

Historical and contemporary perspective of the relationship between the area of psychology and black Americans in research and practice.

3591. INTRODUCTION TO AFRO-AMERICAN LITERATURE. (4 cr, §Engl 3591) Wright

Afro-American prose, poetry, and drama from the late-18th to the mid-20th century.

3592. INTRODUCTION TO BLACK WOMEN WRITERS. (4 cr, §Engl 3592) Reyes

Literary tradition of Afro-American women writers explored in novels, short stories, poetry, essay, autobiography, and drama from the 18th to the 20th century.

3864, 3865. AFRO-AMERICAN HISTORY. (4 cr per qtr, §Hist 3864, §Hist 3865)

3864: African background to reconstruction. 3865: Reconstruction to present.

3910. TOPICS IN AFRO-AMERICAN/AFRICAN STUDIES. (4 cr) Staff

Topics specified in the *Class Schedule*.

3954. SOCIOLOGICAL PERSPECTIVES ON RACE, CLASS, AND GENDER. (4 cr) Brewer

Focuses on a societal-level analysis of race, class, and gender inequality. Examines how the three forms of inequality operate independently and in conjunction with one another in American institutions and society.

3970. DIRECTED STUDIES. (1-15 cr) Staff

Guided individual reading or study.

3991-3992-3993. SENIOR PROJECT IN AFRO-AMERICAN AND AFRICAN STUDIES. (2 cr per qtr; prereq completed CLA composition requirement, permission of undergrad adviser)

Continuous (X) registration three-quarter course for writing of senior paper under the guidance of a faculty supervisor.

5002. HISTORY OF THE CIVIL RIGHTS MOVEMENT. (4 cr, §Hist 5868)

Development of the civil rights movement in the context of broad changes in American society; new approaches to the study of movement emergence and articulation; pertinence for subsequent derivative social movements.

5072. RACISM: SOCIAL-PSYCHOLOGICAL CONSEQUENCES FOR BLACK AMERICANS. (4 cr, §3072) Taborn

For description, see 3072.

5121. CARIBBEAN HISTORY PROSEMINAR. (4 cr, §Hist 5925)

Historical development of the Caribbean region as a whole, emphasizing major themes and approaches to the field.

5181. CONTEMPORARY BLACK THEATRE, 1960-PRESENT. (4 cr, §Th 5181)

Essays, plays, playwrights, and theaters that have contributed significantly to contemporary black theater. From the beginning of the Black Arts Movement to the present.

5182. BLACKS IN AMERICAN THEATRE, 1820-1960. (4 cr, §Th 5182)

Historical survey of significant events in the development of an American black theatrical tradition. A chronological presentation of essays, plays, playwrights, and theaters from early colonial references to the Black Arts Movement.

5200. BLACK AMERICANS AND MENTAL HEALTH. (4 cr) Taborn

Analysis of factors and issues affecting mental health of black Americans and current trends in public policies.

5352. BLACK FAMILIES IN COMPARATIVE PERSPECTIVE. (4 cr) Brewer

Cross-cultural perspectives of family formation, social structure, and gender patterns of families of African descent.

5593. THE AFRO-AMERICAN NOVEL. (4 cr, §Engl 5593) Wright

Contextual readings of 19th- and 20th-century black novelists such as Charles Chesnutt, James Weldon Johnson, Zora Neale Hurston, Richard Wright, Chester Hines, Ann Petry, James Baldwin, John Williams, Toni Morrison, Ishmael Reed.

5595. AFRO-AMERICAN POETRY. (4 cr, §Engl 5595) Wright

Selected Afro-American poets from the 18th to the 20th century, including Phyllis Wheatley, Paul Laurence Dunbar, Sterling Brown, Gwendolyn Brooks, Melvin Tolson, Robert Hayden, Amiri Baraka.

5596. AFRO-AMERICAN AUTOBIOGRAPHY. (4 cr, §Engl 5596) Wright

Literary and intellectual traditions of black autobiography beginning with the 18th-century slave narratives: Equiano, Douglass, DuBois, Hurston, Wright, Malcolm X, Angelou, others.

5597. HARLEM RENAISSANCE: AFRO-AMERICAN ART AND CULTURE IN THE 1920s. (4 cr, §Engl 5597) Wright

A multidisciplinary review of the Jazz Age's Harlem Renaissance: literature, popular culture, visual arts, political journalism, and black and white figures such as Jean Toomer, Claude McKay, Langston Hughes, Bessie Smith, DuBose Heyward, Carl Van Vechten, Eugene O'Neill, Marcus Garvey.

5701-5702. PROSEMINAR: AFRO-AMERICAN STUDIES. (4 cr, §3701-3702) Staff

Exploration of classic works in Afro-American studies. Comparatist framework for Afro-American studies and related issues in multidisciplinary study.

5900s. AFRO-AMERICAN SEMINAR. (2-4 cr per qtr; prereq jr or sr or grad) Staff

Scholars in Afro-American studies help students develop research projects.

5910. TOPICS IN AFRO-AMERICAN/AFRICAN STUDIES. (4 cr) Staff

Topics specified in the *Class Schedule*.

5970. DIRECTED STUDIES. (1-6 cr per qtr; prereq #; qualified sr and grad students may register with # for work on tutorial basis) Staff
Guided individual reading or study.

African Studies (Afro)

See history, geography, and political science for additional African Studies courses.

1021. AN INTRODUCTION TO AFRICA. (4 cr) Coifman

Diverse elements of African studies curriculum, content, and methodology. Historical perspective and present trends.

3001, 3002. INTRODUCTION TO WEST AFRICAN HISTORY. (4 cr) Coifman

3001: Until 1800. 3002: 1800 to present.

3011. ISLAM IN AFRICA. (4 cr) AshShareef

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*. All readings in English.

Major Requirements and Course Descriptions

3013. CITIES IN AFRICA: AFRICAN, ISLAMIC, EUROPEAN TRADITIONS. (4 cr) Coifman

African urban development through time. Links between towns and countryside. Regal-ritual cities; trading cities and city-states; administrative cities; colonial cities and company towns; contemporary cities and illegal urban settlements.

3514. AFRICAN-ARABIC LITERATURE IN TRANSLATION. (4 cr) AshShareef

African literature in Arabic from different countries. Genres represented: novel, short story, poetry, and drama. Emphasis on 20th century. Texts discussed in cultural and historical context. Theoretical and critical essays. Major writers. All reading in English.

3601. INTRODUCTION TO AFRICAN LITERATURE. (4 cr) Pike

Oral and written African literature of the 19th and 20th centuries. All readings in English.

3654. AFRICAN CINEMA. (4 cr) Pike

Examination of films by African filmmakers. Aesthetic, theoretical, and sociopolitical issues explored through class screenings and critical readings. Emphasis on films from sub-Saharan Africa.

3910. TOPICS IN AFRO-AMERICAN/AFRICAN STUDIES. (4 cr) Staff

Topics specified in the *Class Schedule*.

3970. DIRECTED STUDIES. (1-15 cr) Staff

Guided individual reading or study.

3991-3992-3993. SENIOR PROJECT IN AFRO-AMERICAN AND AFRICAN STUDIES. (2 cr per qtr; prereq completed CLA composition requirement, permission of undergrad adviser)

Continuous (X) registration three-quarter course for writing of senior paper under the guidance of a faculty supervisor.

5142. GEOGRAPHY OF EAST AFRICA. (4 cr, §Geog 5142)

Physical and human geography of Kenya, Tanzania, and Uganda. Environment as resource; historical geography of colonial and postcolonial eras; geographical organization of human activity; regional contrasts.

5145. DEVELOPMENT IN AFRICA. (4 cr, §Geog 5145, §IntR 5145; prereq #) Scott

Economic, political, and social development in Africa from independence to the present, emphasizing the reordering of colonial landscape, bases for North-South relations, big power interventions, and participation in the world economy.

5301. AFRICAN LITERATURE: THE NOVEL. (4 cr) Pike

Novels of continental Africa in English, French, and African languages. Non-English materials in translation.

5341. SEMINAR IN CONTEMPORARY KENYAN LITERATURE. (4 cr) Pike

Emphasis on novels of Ngugi, Mwangi, Njau, and Ruheni. Prose works and critical essays. All readings in English.

5551. USE OF ORAL TRADITIONS AS RESOURCES FOR HISTORY: METHODS. (4 cr) Coifman

Use of spoken information passed from person to person through times, mainly in nonliterate societies, as sources for the writing of history. Use of canons of history for analysis and critique of oral traditions; integrating them into written history.

5678. AFRICAN-ARABIC FICTION IN TRANSLATION. (4 cr) AshShareef

Continental African fiction in Arabic from different African countries. Novels and short stories. Major fiction writers. Emphasis on 20th century. Texts discussed in cultural and historical context. Theoretical and critical essays. No knowledge of Arabic required. All readings in English.

5800. AFRICAN STUDIES INTERDISCIPLINARY SEMINAR. (4 cr) Staff

Seminar staffed by cooperating faculty from social sciences and humanities. Selected themes that benefit from interdisciplinary analysis.

5876s. APPROACHES TO AFRICAN DEVELOPMENT. (4 cr, §IntR 5930; prereq 1021) Coifman

Study and comparison of core documents relevant to development in Africa from the World Bank, Organization of African Unity, U.N. Economic Commission on Africa, and John Paul II. Includes critical analysis of documents and consideration of ethics.

5910. TOPICS IN AFRO-AMERICAN/AFRICAN STUDIES. (4 cr) Staff

Topics specified in the *Class Schedule*.

5970. DIRECTED STUDIES. (1-6 cr per qtr; prereq #; qualified sr and grad students may register with # for work on tutorial basis) Staff

Guided individual reading or study.

Swahili (Afro)

1221f-1222w-1223s. BEGINNING SWAHILI. (5 cr) Pike

1221: Beginning grammar and vocabulary; conversational drill.

1222: Grammar and vocabulary. Reading and writing.

1223: Reading, conversation, writing.

3225f, 3226w, 3227s. INTERMEDIATE SWAHILI. (4 cr per qtr; prereq 1223 or #) Pike

3225: Swahili short stories. Vocabulary and grammar.

3226: Swahili plays and short stories.

3227: Advanced Swahili reading.

Arabic (Arab)

1101-1102-1103. BEGINNING ARABIC. (5 cr per qtr) AshShareef

Fundamentals of Arabic based on an audiolingual method; aural comprehension, pronunciation, practical reading knowledge. Basic grammar.

1201-1202-1203. COLLOQUIAL ARABIC. (5 cr per qtr) Youssif

Introductory course intended primarily for business persons and travelers. Fundamentals of vocabulary and sentence structure, introduction to Arabic script.

3101-3102-3103. INTERMEDIATE ARABIC. (5 cr per qtr; prereq 1103 or #) Staff

Review of grammar; analysis of cultural and literary texts; contemporary short stories (third quarter).

3213. THE QUR'AN AS LITERATURE. (4 cr, §MidE 3213) AshShareef

Texts and commentaries in translation. Knowledge of Arabic not required.

3301. MODERN ARABIC POETRY IN TRANSLATION. (4 cr, §5501, §MidE 3301, §MidE 5501) AshShareef

The free verse movement and its major trends: post-romantic, social-realist, symbolist, resistance, and prose poem. Emphasis on leading poets: al-Mala'ika, al-Sayyab, al-Bayati, Adunis, Hawi, al-Khal, al-Fayturi, Abd-al-Sabur, Darwish, Sayigh, Jabra, and al-Maghut. Poems discussed in cultural and historical context. Theoretical and critical essays. All readings in English.

3302. THE ARABIC NOVEL IN TRANSLATION. (4 cr, §5502, §MidE 3302, §MidE 5502) AshShareef

The novel as a new genre in Arabic literature. Trends: realist, psychological, existentialist, feminist, post-modernist/fantastic/experimentalist. Emphasis on major novelists: Mahfouz, Ghanem, Salih, Jabra, Kanafani, El Sa'dawi, al-Shaykh, Munif, Habibi, al-Qa'id, al-Ghitany, and Khouri. Novels discussed in cultural and historical context. Theoretical and critical essays. All readings in English.

3303. ARABIC DRAMA IN TRANSLATION. (4 cr, §5503, §MidE 3303, §MidE 5503) AshShareef

Development of drama as a new genre in Arabic literature under influence of European drama. Different trends: "theater of the mind," social-realist, existentialist, absurdist, experimentalist, epic, and verse drama. Major playwrights: al-Hakim, Abd-al-Sabur, Diyab, Salem, Faraj, Idris, al-Maghut, al-'Ani, Wannus, and al-Madani. Plays discussed in cultural and historical context. Theoretical and critical essays. All readings in English.

5001. INTRODUCTION TO RESEARCH IN ARABIC STUDIES. (4 cr) Youssif

Skills and techniques required to deal with medieval and modern works in Arabic literature and Islam. A survey of the most important research bibliographies in Arabic and Islamic studies. Bibliographic references presented in English and in Arabic if sufficient interest.

5101-5102-5103. ADVANCED LITERARY ARABIC AND COMPOSITION. (5 cr per qtr; prereq 3103 or #) AshShareef

Literary styles and genres in classical and modern writings. Compositions based on texts.

5501. MODERN ARABIC POETRY. (4 cr, §3301, §MidE 3301, §MidE 5501) AshShareef

5502. THE ARABIC NOVEL. (4 cr, §3302, §MidE 3302, §MidE 5502) AshShareef

5503. ARABIC DRAMA. (4 cr, §3303, §MidE 3303, §MidE 5503) AshShareef

5900. TOPICS IN ARABIC LITERATURE. (4 cr per qtr [12 cr max]; prereq 5103 or #) AshShareef

Readings and discussion of selected works in Arabic. Topics specified in the *Class Schedule*.

5970. DIRECTED READINGS. (Cr ar; prereq 5103 or #) Staff

Special problems for advanced students. Reading and periodic consultations.

5990. HONORS COURSE: RESEARCH. (Cr ar; prereq 5970 or #)

Individual studies for honors work at an advanced level.

College of Agriculture

Courses appearing in the CLA Bulletin are approved for CLA credit. However, CLA students may take up to 28 credits of coursework offered by other colleges. The credits may be applied toward CLA degrees, and in some cases they may be used to fulfill general education requirements. Consult your college office adviser for a list of courses from other colleges approved for general education requirements.

Descriptions of courses offered by the College of Agriculture can be found in the bulletin of that college.

Akkadian

See Classical and Near Eastern Studies.

Major Requirements and Course Descriptions

American Indian Studies (AmIn)

Staff—Chair, Thomas King

Associate Professor: King

Assistant Professor: Kilpatrick

Adjunct Faculty—Associate Professor: Miller (General College); *Assistant Professor:* O'Brien (History)

Teaching Specialists: Oakgrove, Schommer
Lecturer: Libertus

American Indian studies is concerned with traditional and contemporary Indian nations, tribes, bands, and groups located in what is now the United States and Canada.

B.A. Major Sequence

Required Preparatory Course—1771

Major Requirements—

Language focus—43-45 cr AmIn, all levels. Six-course sequence in Ojibwe or Dakota language. 14 or more cr AmIn 3xxx, 5xxx. Senior project.

Non-language focus—43-45 cr AmIn, all levels. 39 or more cr AmIn 3xxx, 5xxx. Senior project.

Minor Requirements—16 credits in American Indian Studies 3xxx- or 5xxx-level courses selected with approval of adviser. One course maximum may be taken S/N. Grades of C or better must be earned with A/F courses. Only one course may be taken as directed study.

Introductory

1771. INTRODUCTION TO AMERICAN INDIAN STUDIES. (4 cr) Staff

Content, methods, and objectives of American Indian studies. Images of the American Indian, persistence and change in American Indian communities, linguistics and literature, and tribal ethnohistories.

Language

1021-1022-1023. BEGINNING OJIBWE. (5 cr per qtr) Oakgrove

Acquisition of speaking skills in Ojibwe.

1031-1032-1033. BEGINNING DAKOTA. (5 cr per qtr) Schommer

Acquisition of speaking skills in Dakota.

3024-3025-3028. INTERMEDIATE OJIBWE. (5 cr per qtr; prereq 1023) Oakgrove

3034-3035-3038. INTERMEDIATE DAKOTA. (5 cr per qtr; prereq 1033) Schommer

History

3111. AMERICAN INDIAN HISTORY: MID-15TH CENTURY TO 1850. (4 cr, §Hist 3871) O'Brien
Colonization and survival of North American Indians from rise of ancient American Indian civilizations to beginnings of reservation era.

3112. AMERICAN INDIAN HISTORY: 1850 TO PRESENT. (4 cr, §Hist: 3872) O'Brien
American Indian communities from reservation era to present, emphasizing impact of federal Indian policy.

3121. HISTORY OF AMERICAN INDIAN EDUCATION. (4 cr; prereq 3111, 3112 or #)
American Indian education in the United States; emphasis on educational systems established by the Indian peoples.

Tribal Arts and Culture

3026. OJIBWE CULTURE AND HISTORY. (4 cr) Staff
The processes of maintenance and change in Ojibwe culture.

3036. DAKOTA CULTURE AND HISTORY. (4 cr) Staff
The processes of maintenance and change in Dakota culture.

3116. AMERICAN INDIAN LITERATURE. (4 cr) King
Comparative studies of oral traditions and modern tribal literature.

3211. AMERICAN INDIAN PHILOSOPHIES. (4 cr)
Comparative studies of American Indian philosophies, tribal world views, and sources of ecological consciousness.

3242. SURVEY OF AMERICAN INDIAN ARTS. (4 cr) Libertus
Visual arts and crafts of North American Indians.

Contemporary Issues

5341. CONTEMPORARY INDIAN MOVEMENTS. (4 cr)
Examination of contemporary Indian organizations and social movements during the 20th century.

Tribal Development

5411. URBAN INDIAN COMMUNITIES. (4 cr) Libertus
Social science and historical analysis of the rapid cityward Indian migration since World War II.

Special Topics

3960. TOPICS IN AMERICAN INDIAN STUDIES.

(Cr ar) Staff

Topics specified in the *Class Schedule*.

5920. SEMINAR IN AMERICAN INDIAN STUDIES. (Cr ar) Staff

5960. TOPICS IN AMERICAN INDIAN STUDIES.

(Cr ar) Staff

Topics specified in the *Class Schedule*.

Tutorial

3810. FIELD PRACTICE IN INDIAN STUDIES.

(3-9 cr; prereq soph or jr or sr, #, Δ) Staff

Supervised field practice in approved agencies serving Indian clients.

3970. DIRECTED STUDIES. (1-15 cr; prereq #, Δ) Staff

Topics in American Indian Studies.

3980. DIRECTED INSTRUCTION. (5 cr; prereq #) Staff

Seminar in teaching skills for undergraduates assisting in introductory American Indian studies courses. Leading discussion sections, offering lectures.

5990. DIRECTED RESEARCH. (1-15 cr per qtr; prereq #, Δ) Staff

Independent research under faculty guidance.

American Studies (AmSt)

Staff—*Chair*, Elaine Tyler May, 104 Scott Hall; *Director of Graduate Studies*, Riv-Ellen Prell; *Director of Undergraduate Studies*, Mario Montaña

Professors: Delattre, E. May, Noble

Associate Professors: King, L. May, Prell, Yates

Assistant Professors: Kilpatrick, Montaña

Adjunct Faculty—*Professors*: C. Anderson (English), Bagley (Social, Psychological, and Philosophic Foundations of Education), Bales (English), Ball (Political Science), Berman (History), Born (Health Ecology), Brauer (History), Clemence (Architecture and Landscape Architecture), Dicken-Garcia (Journalism and Mass Communication), Dobbert (Social, Psychological, and Philosophical Foundations of Education), Evans (History and Center for Advanced Feminist Studies), Furia (English), Gersmehl (Geog-

raphy), Gillmor (Journalism and Mass Communication), Griffin (English), Howe (History), Hoyle (Children's Literature Research Collection), Kohlstedt (History of Science and Technology), Laslett (Sociology), Layton (Mechanical Engineering and History of Science and Technology), Marling (Art History), McClary (Music), McNaron (English), Menard (History), Murphy (History), Nelson (Humphrey Center), Roth (English), Sarles (Anthropology), Stekert (English), Steuerer (Physics and History of Science and Technology), Sykes (Speech-Communication), Vecoli (History), Ward (Journalism and Mass Communication), Zipes (German)

Associate Professors: Aminzade (Sociology), Archer (Humanities), Brewer (Afro-American Studies), Dietz (Political Science), Dolan (Philosophy), Geffen (English), Green (History), Krotee (Kinesiology), Martin (Geography and Urban Studies), C. Miller (General College and American Indian Studies), R. Miller (Geography), Peck (Speech Communication), Roberts (Journalism and Mass Communication), Rojas (Chicano Studies), Ruggles (History), Scanlan (Rhetoric), Silberman (Art History), Spear (History), Valdés (History and Chicano Studies), J. Wright (English and Afro-American and African Studies)

Assistant Professors: Damon (English), O'Brien (History and American Indian Studies), Rabinowitz (English)

Lecturers: Tsuchida (Director, Minority and Special Student Affairs)

Fellows: Boston (Men's Intercollegiate Athletics), Boyte (Humphrey Institute of Public Affairs)

The program in American Studies enables students to explore the major issues and problems of American society through a multi-disciplinary examination of the arts, history, politics, and literature of the diverse peoples of the United States.

Study Abroad—Knowledge of at least one other culture in some depth is indispensable

Major Requirements and Course Descriptions

to understanding our own, and students are strongly encouraged to incorporate an overseas study experience into their degree program. Appropriate credits from such study easily can be applied toward an American Studies major or minor. Among the many study abroad opportunities is a reciprocal exchange program in American Studies with England's University of Essex. For information on options and procedures, see Foreign Study.

B.A. Major Sequence

Required Preparatory Courses—12 cr from 1001, 1002, 1003, 3111, 3112, 3113

Major Requirements—44 cr from 3xxx- or 5xxx-level courses approved by major adviser, 8 to 12 in each of four fields: American history, American literature, American art and philosophy, social sciences in the United States. All courses must be taken A-F. A list of approved courses and a brochure describing the program are available in the program office, 104 Scott Hall.

3299, 3301-3302-3303 (Proseminars: American Studies)

12 cr in courses dealing with foreign civilizations chosen in consultation with major adviser

B. A. Minor Sequence

Minor Requirements—20 cr from 3xxx- or 5xxx-level courses, eight of which must be taken in proseminar sequence 3299, 3301, 3302, 3303, with A-F grading.

1001, 1002, 1003. AMERICAN CULTURES. (4 cr per qtr)

Interdisciplinary study examining 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, Asian American, and Chicano and Latino. *1001*: to mid-19th century. *1002*: Mid-19th century to the 1920s. *1003*: 1920s to the present.

3111. CREATIVE AMERICANS AND THEIR WORLDS. (4 cr)

The cultural life of Americans through study of works and lives of selected artists in several media, including painting, literature, architecture, music, and drama. See *Class Schedule* for specific topics.

3112. AMERICAN EVERYDAY LIFE. (4 cr)

Cultural formation and expression of experience among Americans through study of common population and consumer patterns, family life, work, and leisure activities.

3113. AMERICAN CULTURAL DIVERSITY. (4 cr)

The cultural expression, values, and lifestyles of America's many peoples, including minority and majority cultures.

3114. AMERICA IN INTERNATIONAL PERSPECTIVE. (4 cr)

In three interrelated segments, the course explores foreign perspectives on institutions and values of the United States; examines the interaction among European settlers, later immigrants, and minorities in distinct regions; surveys the impact of America on foreign countries.

3251, 3252, 3253. AMERICAN POPULAR CULTURE. (4 cr per qtr)

3251: 1800-1900. *3252*: 1900-1945. *3253*: 1945 to present.

3299. PROSEMINAR: AMERICAN STUDIES. (4 cr)

Exploration of the classic works in American Studies.

3301-3302-3303. PROSEMINAR: AMERICAN STUDIES. (4 cr per qtr; prereq AmSt sr)

Each quarter covers a problem related to a representative theme, figure, or period. Students research and write senior theses.

3401. JAPANESE AMERICANS AND WORLD WAR II: RACISM, WAR, AND THE CONSTITUTION. (4 cr)

The wartime evacuation and incarceration of Japanese Americans from historical, sociological, legal, and literary perspectives.

3404. AMERICAN FOODWAYS. (4 cr)

Introduction to American Foodways scholarship. Explores issues relevant to anthropology, folklore, and history.

3920. TOPICS IN AMERICAN STUDIES. (4 cr per qtr [12 cr max]; prereq jr or sr)

Topics specified in the *Class Schedule*.

3970. DIRECTED STUDIES. (1-15 cr per qtr)

Guided individual reading or study.

5101, 5102. RELIGION AND AMERICAN CULTURE. (4 cr per qtr) Delattre

Not a survey, but a representative profile of past and present religion in America, organized around a theme or problem.

5920. TOPICS IN AMERICAN STUDIES. (2-6 cr per qtr [12 cr max]; prereq #)

Topics specified in the *Class Schedule*.

Ancient Near Eastern Studies

See Classical and Near Eastern Studies.

Anthropology

Staff—Chair, Frank C. Miller, 200 Ford Hall; *Director of Undergraduate Studies*, Eugene Ogan

Professors Emeriti: Hoebel, Murrill, Spencer

Professors: Gerlach, Gibbon, Gudeman, Ingham, Miller, Ogan, Rowe

Associate Professors: Dunnigan, Goodwin-Raheja, Hastorf, Lipset, Penn, Spector

Anthropology is the study of human life as manifested in fossil and archaeological records, in the interplay between human biological and social natures, and in the cultures and languages of contemporary societies. An anthropological examination of highly variable and often distant ways of life provides both understanding and appreciation of human diversity and a critical perspective on our own society and cultural assumptions.

General Education—1101 and 1102, dealing with human culture in all times and places, are especially appropriate for general and liberal education. 3131, 5131, 5141, 5151, 5161, and all ethnography and archaeology courses in cross-cultural studies are appropriate for the nonmajor.

Study Abroad—Majors and minors are urged to begin acquiring functional skills in a second language early so that they can complement their anthropological studies by participating in MSID, SPAN, HECUA or some other overseas study program that offers an intensive exposure to other cultures. See also Foreign Study.

B.A. Major Sequence

Required Preparatory Courses—1101, 1102

Major Requirements—Two courses selected from 3111, 3201, 3302, 3366 (9-10 cr)

Anth 5104 or 5592

Major project: Anth 5960 or 5961

Five electives from 3xxx and 5xxx courses, two of which must be at the 5xxx level

Minor Sequence

Required Preparatory Courses—1101 or 1102 (both are strongly recommended)

Minor Requirements—Four 4-cr courses that have a common focus and are selected from one or more of the subdisciplines. Course selections must be approved by the director of undergraduate studies or the undergraduate adviser.

Introductory

1101f,w,s,su. HUMAN ORIGINS. (5 cr)
World prehistory as investigated by anthropologists. Methods and concepts used by anthropologists to study prehistoric human biological and cultural development.

1101Hf,w,s. HONORS COURSE: HUMAN ORIGINS. (5 cr; prereq B avg or #)
For description, see 1101.

1102f,w,s,su. INTRODUCTION TO SOCIAL AND CULTURAL ANTHROPOLOGY. (5 cr, §1115, §5102)
Comparative study of societies and cultures around the world, to illustrate anthropology's perspective on human behavior. Topics include personality and culture; economic processes in society; marriage and kinship; social stratification; politics and conflict; religion.

1102Hf,w,s. HONORS COURSE: INTRODUCTION TO SOCIAL AND CULTURAL ANTHROPOLOGY. (5 cr; prereq B avg or #)
Theories and concepts of social and cultural anthropology, examined in the light of classic statements of anthropological theory and classic ethnographic accounts.

3002. PRIMATE AND HUMAN EVOLUTION. (4 cr; prereq 1101 or introductory biology course or #)
Origins and relationships of extinct forms of nonhuman primates and humans.

3003. THE RISE OF CIVILIZATION. (4 cr)
Beginnings of agriculture and emergence of world civilizations. Development of state societies from an archaeological perspective.

3111. INTRODUCTION TO ARCHAEOLOGY. (5 cr)
Introduction to the fundamentals of archaeological field and laboratory analysis.

Major Requirements and Course Descriptions

5102. PRINCIPLES OF CULTURAL ANTHROPOLOGY. (4 cr, §1102; prereq jr or #)

Elements of cultural anthropology. Range and variability of human behavior. Principles of cultural dynamics.

Special Topics

3960. ANTHROPOLOGY PROSEMINAR. (4 cr; prereq #)

Topics vary according to staff interests and student suggestions. Focus on significant theoretical problems.

3970. DIRECTED STUDIES. (Cr ar; prereq #)

Guided individual reading or study.

3980. DIRECTED INSTRUCTION. (1-5 cr; prereq #)

Teaching seminar for undergraduates assisting in instruction of introductory anthropology courses.

3992H. HONORS TUTORIAL. (1 cr; cannot be applied toward any CLA degree)

Program and project planning. Evaluation of work to date; planning future coursework and, particularly, developing a prospectus for senior research project. Normally completed at least three quarters before graduation.

5910, 5920. TOPICS IN ANTHROPOLOGY. (Cr ar)

Special courses in all branches of anthropology. Topics specified in the *Class Schedule*.

5960. SENIOR SEMINAR. (4 cr; prereq sr anthropology major)

Research seminar. Topics vary according to staff and student interests.

5961. SENIOR RESEARCH PROJECT. (4 cr; prereq sr anthropology major, #)

Independent research project fulfilling the senior option; directed by a faculty member.

5970. DIRECTED READINGS. (2-4 cr; prereq #)

Qualified students may register for work on tutorial basis.

Approaches to Anthropology

3201. APPROACHES IN CULTURAL ANTHROPOLOGY. (4 cr; prereq 1102 or #)

Humanistic and scientific conceptions of culture. Interpretation and explanation. Theoretical foundations of current anthropological thought.

3302. METHOD AND THEORY IN HUMAN BIOLOGY. (5 cr; prereq 3001 or #)

Theoretical frameworks/methods for study of past and present human populations. Topics vary; consult instructor.

3366. LANGUAGE AND SOCIAL ANALYSIS. (5 cr; prereq 1102 or 5102 or #)

Social structure and process through language; field observation emphasized. Some knowledge of descriptive linguistics useful but not required.

3376. FIELD RESEARCH IN ARCHAEOLOGY.

(2-10 cr; prereq 1101 or #)

Archaeological field excavation, survey, and research in prehistoric sites in Minnesota. Excavation techniques, recording analysis, and interpretation of archaeological materials.

3377. LABORATORY TECHNIQUES IN ARCHAEOLOGY. (4 cr; prereq 3376 or #)

Artifact analysis, preservation, cartography, photography, faunal and floral analysis, writing of site reports.

5104. HISTORY OF ANTHROPOLOGY. (4 cr; prereq 1102, 15 cr in 3xxx and 5xxx courses)

Principal themes in 19th- and 20th-century anthropological thought—diffusionism, the autonomy of culture, evolutionism, and emerging methodological viewpoints (i.e., functionalism, structuralism, cultural materialism, and interpretivism). Is there a logic of anthropological inquiry?

5301. ADVANCED METHOD AND THEORY IN ARCHAEOLOGY. (4 cr; prereq 3111 or #)

Advanced survey and in-depth discussion of past and contemporary archaeological, theoretical, and methodological issues and approaches. Series of projects incorporating theories and methods, including simple computer analysis. Recommended for anthropology majors specializing in archaeology.

5305. STUDIES IN ETHNOGRAPHIC CLASSICS. (5 cr)

Notable theoretical and ethnographic works in the history of anthropology. Topics and works vary yearly.

5331. CULTURE THEORY: AN INTRODUCTION. (4 cr; prereq jr or sr or grad student or #)

Selected issues in the development of culture theory, e.g., do cultural phenomena have an independent reality or are they derived from social systems?

5392. PHILOSOPHICAL ANTHROPOLOGY. (4 cr; prereq 1102 or 5102)

Survey of a cluster of traditional problems associated with major views on human nature and culture. Variations on these views and specific arguments of relativists, phenomenologists, behaviorists. Recent ethnographic theory.

5394. PHENOMENOLOGY AND ETHNOGRAPHY. (4 cr, §Hum 5398)

Phenomenological/existentialist thought conceived as "the end of ideology"; its politicization during World War II: its use in reflexive anthropology conscious of its own colonial foundations; its use in attempts to understand The Other and concepts of the person.

5520. CURRENT ISSUES IN ARCHAEOLOGY. (4 cr; prereq 3111 or #)

Discussion/review/analysis of specific current theoretical and/or methodological issues in archaeology.

5524. ARCHAEOLOGICAL RESEARCH DESIGN.

(4 cr; prereq jr or sr anthropology major, 12 cr upper div archaeology coursework or #)
Recommended for anthropology majors specializing in archaeology who select senior project option. Background research, techniques, methods, and concepts for senior research project. Development of annotated bibliography and detailed research proposal.

5592. HISTORY OF ARCHAEOLOGY. (4 cr; prereq 12 cr in 3xxx or 5xxx anthropology courses)

Survey of the history of archaeology with emphasis on the development of major concepts and research goals.

Cross-Cultural Studies

3211. NATIVE PEOPLES OF NORTH AMERICA.

(4 cr)
Aboriginal cultures of native North America. Effects of culture contact.

3212. INDIANS OF THE GREATER SOUTHWEST.

(4 cr)
Cultures and histories of Indian peoples in the southwestern United States and northwestern Mexico.

3222. PEOPLES AND CULTURES OF MIDDLE AMERICA. (4 cr)

Indian-Spanish speaking peoples of Middle America. Processes of acculturation that have produced contemporary cultures of Mexico and Central America.

3223. PEOPLES AND CULTURES OF THE CARIBBEAN. (4 cr)

Island and littoral cultures of the circum-Caribbean. Social structure, cultural pluralism, continuity, and change.

3224. HISPANIC CULTURES OF LATIN AMERICA. (4 cr; prereq 1102 or #)

Examine data from Mexico to South America. Topics such as the economy, family, gender, religion, and ideology. Several conceptual frameworks used including structural, symbolic and cultural interpretations, history, and impact of colonialism.

3241. PEOPLES AND CULTURES OF AFRICA. (4 cr, §Afro 3501)

Key aspects of society, culture, and ecological adaptation of African people south of the Sahara. Aesthetic expression, social, economic, political, and religious systems. Theoretical problems in African anthropology.

3261. INDIAN CULTURE AND SOCIETY. (4 cr)

Survey of broad South Asian civilization patterns and ethnographic contexts; theoretical issues in forming South Asian anthropology. Caste, sovereignty, and polity; person and society; kinship, marriage, and gender; ritual; colonial discourse and transformations.

3293. PEOPLES AND CULTURES OF THE PACIFIC ISLANDS. (4 cr)

Geography, prehistory, and Western exploration of Pacific island peoples, from Hawaii to Papua New Guinea. Topics in regional ethnography. Relationship of Pacific cultures to major problems in anthropological thought.

3294. THE CONTEMPORARY PACIFIC. (4 cr; prereq 3293 or #)

Life in 20th-century Pacific Island societies. Effects on and perceptions of colonialism and the world system by islanders: political and economic development, the post colonial state, ethnicity and emigration. Changes in the status of women, expressive culture, psychosocial adjustment, and religion.

3371. ARCHAEOLOGY OF PREHISTORIC EUROPE. (4 cr, §5120, §AnSt 5120)

Early development of non-Mediterranean European society from Old Stone Age through Iron Age to the Roman Period, based on archaeological evidence. Principal transformations of European culture with introduction of agriculture, development of metallurgy and trade, and emergence of towns and cities.

3511. ARCHAEOLOGY OF NATIVE AMERICANS. (4 cr; prereq 1101 or #)

Prehistoric and early archaeology of American Indians north of Mexico.

3512. ANDEAN ARCHAEOLOGY. (4 cr; prereq 1101, 3111 or #)

Development of pre-Hispanic culture and society in Andean region of South America, emphasizing major political, economic, and cultural processes in the rise of civilizations. Presentation based on archaeological evidence, but includes ethnographic, linguistic, and environmental materials.

3521. PREHISTORIC ARCHAEOLOGY OF MIDDLE AMERICA. (4 cr; prereq 1101 or #)

Development of major features of prehistoric cultures of Mexico and Central America.

Human Institutions: Past, Present, and Future

3131. RELIGION AND CULTURE. (4 cr; prereq 1102 or #)

Anthropological perspectives on religion. Religion in relation to social order and individual life cycle. Religion and cultural change.

5112. KINSHIP AND MARRIAGE. (4 cr; prereq 1102 or 5102, 3201 or #)

Systems of kinship and marriage in cross-cultural perspective; relationship to economic, religious, and political institutions; significance of kinship studies for theory and methods in social anthropology.

Major Requirements and Course Descriptions

5115. ECONOMIC ANTHROPOLOGY. (4 cr; prereq 1102 or 5102, 3201 or #)

Systems of production and distribution, especially in nonindustrial societies. Comparison, history, and critique of major theories in the field; development of an anthropological approach to facts and processes of the economy in other societies and our own.

5118. POLITICAL ANTHROPOLOGY. (4 cr; prereq 1102 or 5102 or #)

Anthropological approaches to politics: the structural-functionalists, Manchester school, others. Key political concepts: authority, legitimacy, power, ideology, order, and conflict. How symbols and ritual shape political processes. Symbolic dimensions of ethnic and class consciousness.

5120. ORIGINS OF EUROPEAN CIVILIZATION. (4 cr, §3371, §AnSt 5120; offered through Extension) Early development of European society, from Old Stone Age to Roman Period. Special attention to principal transformations of European culture with introduction of agriculture, development of metallurgy and trade, and emergence of towns and cities.

5121. ANTHROPOLOGY OF LAW. (4 cr; prereq 1102 or 5102 [waived for majors in political science and law])

Theory and method of various legal systems. Cultural background of law and relation of law to society. Functions and evolution of law in cultures ranging from primitive to complex.

5131. ANTHROPOLOGY OF RELIGION. (4 cr; prereq 1102 or 5102 or #)

Comparative study of beliefs, myths, and rituals in folk and indigenous religions. Integration of religion and social relations.

5156. CULTURE AND COMPARATIVE POLITICS. (4 cr; prereq 1102 or #)

Theoretical analyses and comparative case studies illustrating how aspects of culture influence political behavior in society.

5157. THE POLITICAL DISCOURSE OF SOCIAL CHANGE. (4 cr)

Tension between tradition and innovation of ideas, techniques, and material development in contexts of rapid social change, especially when local cultures come into contact with outside, politically more forceful ones. Tradition as an already politicized discourse.

5161. CULTURAL SEMANTICS. (4 cr; prereq #)

Language-based approaches to the study of cultures.

5178. ARCHAEOLOGY OF NORTHERN EUROPE. (4 cr, §AnSt 5178; prereq 1101, 3003 or 3371 or #; offered through Extension)

Archaeology of Scandinavia, northern Germany, and neighboring regions in the Bronze and Iron Ages and the Roman and Migration Periods. Trade, growth of towns, and changing art, ritual, and religion.

5325. GENDER AND POWER IN SOUTH ASIA.

(4 cr; prereq 1102, 3261 or 5102 or #)

Exploration of multiple perspectives on gender, power, kinship, and sexuality in South Asian society and the theoretical issues this poses for ethnographic writing. Focus on textual traditions, folklore, ritual and exchange, and the politics of everyday life.

Mind, Self, and Society

3303. WOMEN: ANTHROPOLOGICAL PERSPECTIVES. (4 cr; prereq 1102; WoSt 1001, WoSt 1002 recommended; offered through Extension)

A cross-cultural, comparative study of women and gender. Theoretical and methodological approaches in anthropology to the study of gender.

5114. STRUCTURAL ANTHROPOLOGY. (4 cr; prereq 1102 or 5102, 3201 or #)

Assumptions, methods, and problems of structural and semiotic anthropology; theory and analysis of kinship, myth, and social organization.

5132. SYMBOLIC ANTHROPOLOGY. (4 cr; prereq 1102 or 5102, 5112 or #)

Introduction to semiotic or symbolic interpretation of cultures in anthropology. Problems in theory and method; structure and motivation of cultural symbolism in particular societies.

5141. CULTURE AND PERSONALITY. (4 cr; prereq 1102 or 5102 or # [waived for majors in public health,

nursing, psychology, sociology, and social work]) Role of culture in formation of personality. Individual adjustments to demands of culture. Psychological approach to culture.

Human Environments: Natural and Cultural

5116. ECOLOGICAL ANTHROPOLOGY. (4 cr; prereq 1102, 3201 or 5102)

Anthropological approaches to human-environment interactions. Marxist, ecological, biological, humanistic, and ethnoscientific approaches to culture and resources. Issues of energetics, production, consumption, values, and conservation.

5117. ANTHROPOLOGY OF RESOURCE MANAGEMENT. (4 cr)

Ways in which social institutions and cultural concepts are applied and changed across world societies to develop, use, and manage key environmental resources. A cultural, ecological, and systems approach. Comparative studies from contemporary and historical United States, Western Europe, Africa, Asia, and the Caribbean.

5176. ENVIRONMENTAL ARCHAEOLOGY. (4 cr; prereq 1101, 3111 or #)

Archaeological and natural-scientific approaches to the study of past human society with emphasis on use of the environment and reconstructing past environmental conditions. Field and laboratory techniques in association with archaeological research problems.

Contemporary, Complex Societies

5145. ANTHROPOLOGY AND EDUCATION. (4 cr, §SPFE 5171; prereq 1102 or 5102 or #)

Cross-cultural perspectives on educational patterns; implicit and explicit cultural assumptions. Methods and approaches to cross-cultural studies in education.

5151. CULTURAL CHANGE AND DEVELOPMENT. (4 cr; prereq 1102 or 5102 or #)

Processes of cultural change: invention, innovation, diffusion, and acculturation. Theories of modernization, dependency, and world-systems. Roles of anthropologists in development programs.

5152. ANTHROPOLOGY OF SOCIAL MOVEMENTS. (4 cr)

Cross-cultural study of the nature, process, and function of social, political, and religious movements of change. Theories and case studies, including Christianity, Islam, Asia, Africa, and United States.

5153. URBAN ANTHROPOLOGY. (4 cr; prereq 1102 or 5102 or #)

Structure and process in non-Western urban centers; the role of rural migrants, relationship of urbanism to political and economic development, role of voluntary associations, adjustment of kinship groups to urban life.

5154. ANTHROPOLOGY OF COLONIALISM. (4 cr; prereq 1102 or 5102 or #)

Social, structural, symbolic, and psychological aspects of societies of colonizers and the colonized; emphasis on South Asia, Oceania, and Puerto Rico.

5258. ANTHROPOLOGICAL ANALYSIS OF AMERICAN CULTURE. (4 cr; prereq 1102 or 5102 or #)

Anthropological perspectives on contemporary American culture and society; values, family organization, socialization and kinship, education, and community integration.

Arabic

See Afro-American and African Studies or Institute of Languages and Literatures.

Aramaic

See Classical and Near Eastern Studies.

Architecture (Arch)

College of Architecture and Landscape Architecture

Staff—Head, Garth Rockcastle, 110 Architecture; *Director of Undergraduate Studies,* Stephen Weeks; *Director of Graduate Studies,* Julia Robinson

Professors: Clemence, Fraker, Grebner, LaVine, Parker, L., Rauma, Rockcastle, Stageberg, Thorbeck

Associate Professors: Dittmar, Kodet, Lockhart, Morrish, Mulfinger, Robinson, Satkowski, Tollefson, Weeks

Assistant Professors: Abbott, Anderson (on leave fall 1992), Jara, Meyer, Parker, A., Piotrowski, Quigley, Scherer, Tanick

Lecturers: Emmons, Mack, Rhoades

Architecture examines ways to explore and understand the relationship between people and their physical environment. It focuses on the meaning and experience of people's physical settings, landscapes, cities, and buildings.

Central to architecture's mission is coursework in design, by which principles are invented, explored, and applied. Additional courses in history and graphics orient students to explore architecture's many dimensions.

General Information—The four-year CLA program, leading to the B.A. in architecture, normally is seen as preprofessional preparation for admission to the Graduate School for work toward the professional master of architecture (M.Arch.) degree. The B.A. in architecture seeks students with demonstrated academic skills, artistic talent, professional orientation, and a commitment to the study of architecture. An information packet, course descriptions, and application for admission are available in the Architecture Office, 110 Architecture (612/624-7866).

B.A. Major Sequence

Students must present the following: a minimum of 75 degree credits, including all the required preparatory courses; a portfolio of

Major Requirements and Course Descriptions

creative works; and a written essay. Admission is competitive and consideration is given to students who have an overall GPA of at least 2.75. However, a 2.75 GPA does not ensure acceptance. Annual deadline for application is April 1. (The department waives responsibility for loss or damage to the portfolio.) Admitted students must have completed all prerequisite courses before enrolling in the design sequence Arch 3081-82-83.

Students seeking architecture as their major will be classified as "pre-Arch" until the above prerequisites are met. They formally apply for admission and are admitted as an architecture major. All preparatory and required major courses are completed A-F.

Required Preparatory Courses—1021, 1022, 1023; Phys 1041-1042, 1045-1046 or approved equivalent; Math 1142 or 1211; minimum 8 cr in studio arts or drawing from the following: ArtS 1101, 1304 or 3105; Arch 1010, 1041-1042-1043, 1071-1072-1073; Comp 1011

Major Requirements—3081-3082-3083, 3091-3092-3093; three courses from 5051, 5052, 5053, 5054, 5055, 5056, 5061, 5064, 5067, 5068; upper-level writing course, Comp 3012 or 3013 or 3031 highly recommended before taking architecture history

Additional Information—If you plan to pursue a professional degree in architecture, consult the Architecture Office. The Department of Architecture is considering significant curricular revisions. New course offerings in preparation for the professional degree and new admissions criteria will be approved during the 1992-93 academic year. If you are considering entry to a professional degree program in architecture for fall 1993 or later, contact the Department of Architecture for changes in department requirements. Write to Department of Architecture, 89 Church Street S.E., University of Minnesota, Minneapolis, MN 55455 or phone 612/624-7866.

1010. INTRODUCTION TO ARCHITECTURAL DRAWING. (4 cr)

Perception and representation in architecture. Orthographic, oblique, isometric projections, and perspective drawing. Development of freehand drawing.

1021f. HISTORY OF ARCHITECTURE. (4 cr, §LA 1021; 4 lect hrs per wk) Satkowski

Introduction to history and theory of architecture. Survey of architecture from ancient through modern periods.

1022w. HISTORY OF LANDSCAPE ARCHITECTURE. (4 cr, §LA 1022; 4 lect hrs per wk)

Introduction to history and theory of landscape architecture. Survey of landscape architecture from ancient through modern periods.

1023s. HISTORY OF CITIES. (4 cr, §LA 1023; 4 lect hrs per wk) Satkowski

Introduction to history and theory of urban design. Survey of urban design from ancient through modern periods.

1041-1042-1043. ARCHITECTURAL GRAPHICS.

(2 cr per qtr; restricted to pre-architecture and architecture students or #; 2½ lab hrs per wk) Grebner
Skills, media, and techniques of architectural graphics communication, including perspective systems, shade and shadow, color, freehand drawing, and organizing presentation material.

1071. BASIC DESIGN I. (4 cr; 5 lect hrs per wk) Grebner

Skills and techniques of basic design: perceptual/environmental awareness; verbal/written description; narrative translation and graphic simulation; drawing, visual thinking, and descriptive geometry.

1072. BASIC DESIGN II. (4 cr; prereq 1071 or #; 5 lect hrs per wk) Grebner

Knowledge and analysis of design; formal elements/principles of design; methods and techniques of analysis/problem solving; freehand and graphics, perspective and systems; including color.

1073. BASIC DESIGN III. (4 cr; prereq 1072 or #; 5 lect hrs per wk) Grebner

Process and methods of design; use of metaphor, analogy, reference in synthesis. Design projects related to major area of environmental design; object, interior, architecture, and landscape design.

3060. TECHNOS: FORCE, FORM, AND ARCHITECTURE. (4 cr; prereq 1021, ¶3081, architecture major; 2 lect and 3 seminar hrs per wk) LaVine

Fundamental conceptual frameworks that relate science, technologic, and building expression to architectural form. Present day to ancient periods. Climate and force as applied to structures; case studies.

3081-3082-3083. ARCHITECTURAL DESIGN. (6 cr per qtr; prereq architecture major, 18 lab hrs per wk) Weeks

Perceptual and conceptual aspects of the physical environment. Fundamentals of architectural design and design methodology. Architectural drawing. Model making.

3091-3092-3093. ARCHITECTURAL DESIGN. (6 cr per qtr; prereq architecture major, 3083; 18 lab hrs per wk) LaVine

Architectural problems with emphasis on development of structures as an integral part of design; site planning; design process.

3970. DIRECTED STUDIES. (Cr ar; prereq 3081 or #)

Areas of study useful to individual program; objectives not available in regular course offerings.

5051. ANCIENT ARCHITECTURE. (4 cr; prereq 1021 or #; 3 lect and 1 seminar hrs per wk) Satkowski
History of development of architecture and urban design in Egypt, Mesopotamia, Crete, Mycenae, and classical Greece and Rome until the advent of Christianity.

5052. EARLY MEDIEVAL ARCHITECTURE. (4 cr, §ArH 5052; prereq 1021 or #; 3 lect and 1 seminar hrs per wk) Satkowski

Architecture and urban design during early Christian, Byzantine, Islamic, Carolingian, and Romanesque periods in the Near East and Western Europe until 1150.

5053. GOTHIC ARCHITECTURE. (4 cr, §ArH 5053; prereq 1021 or #; 3 lect and 1 seminar hrs per wk) Satkowski

Architecture and urban design in Western Europe from 1150 until 1400.

5054. RENAISSANCE ARCHITECTURE IN ITALY. (4 cr, §ArH 5054; prereq 1021 or #; 3 lect and 1 seminar hrs per wk) Satkowski

History of architecture and urban design in Italy, 1400-1600. Emphasis on major figures (Brunelleschi, Alberti, Bramante, Palladio) and the evolution of major cities (Rome, Florence, Venice).

5055. 18TH-CENTURY ARCHITECTURE AND THE ENLIGHTENMENT. (4 cr, §ArH 5055; prereq 1021 or #; 2 lectures per wk) James

Architecture, urban planning, and garden design in Europe, 1700-1850.

5056. MODERN ARCHITECTURE. (4 cr, §ArH 5056; prereq 1021 or #; 3 lect and 1 seminar hrs per wk) James

Architecture and urban design from early 19th century sources in Europe and America to World War II.

5061. CONTEMPORARY ARCHITECTURE. (4 cr, §ArH 5061; prereq 1022, 3083 or #; 3 lect and 1 seminar hrs per wk) James

Developments, theories, stylistic movements, and trends in architecture and urban design from World War II to the present.

5064. BAROQUE ARCHITECTURE IN ITALY.

(4 cr; prereq 1021 or #; 3 lect and 1 seminar hrs per wk) Satkowski

Architecture and urban design in Italy, 1600-1750. Emphasis on major figures (Bernini, Borromini, Cortona, Guarini) and the evolution of major cities (Rome, Turin).

5101, 5102, 5103. TUTORIAL WORK IN HISTORY OF ARCHITECTURE. (4 cr per qtr; prereq architecture major, 12 upper division cr in history or #; 1 conf and 5 research hrs per wk)

Readings and written reports on special historical problems.

5137. PLANNING: URBAN FUNCTION AND STRUCTURE. (4 cr; prereq 3093 or #)

Economic, technological, and social factors that underlie the location, distribution, and internal structure of urban settlements. Quantitative and qualitative analyses of social, economic, and physical problems or consequences of contemporary urbanization.

5138. PLANNING: THEORY AND METHODOLOGY. (4 cr; prereq 5137 or #)

Logic of a planning process as a method of decision making. Formulation of goals and evaluation of alternative courses of action, standards, and requirements for specific planning objectives (e.g., housing, transportation, community facilities). Legal, administrative, and fiscal devices for plan implementation. The planning function in government; the role of citizens and private groups.

5141. HISTORIC PRESERVATION PROCESS.

(4 cr; prereq 1021 or #; 4 lect hrs per wk) Mack
Philosophy and theory of historic preservation, historic origins, descriptive analysis of buildings, building documentation, technology of building conservation, historical archaeology, economic considerations, preservation law, guidelines for preservation, neighborhood conservation, international preservation, and case studies of representative preservation projects.

5142. HISTORIC BUILDING CONSERVATION.

(4 cr; prereq 5141 or #; 2 lect and 2 lab hrs per wk) Mack
Historic building systems, materials, and methods for their conservation; use of contemporary systems in historic buildings.

5143. HISTORIC BUILDING RESEARCH AND DOCUMENTATION. (4 cr; prereq 5141 or #; 2 lect and 2 lab hrs per wk) Mack

Philosophy, theory, and methods of historic building research, descriptive analysis of buildings, building documentation, historical archaeology, and architectural taxonomy.

5850. TOPICS IN THEORY. (2 cr; prereq architecture major)

Special topics in architecture examined in a philosophical and theoretical context.

Major Requirements and Course Descriptions

5851. ARCHITECTURE: THEORY AND PHILOSOPHY. (3 cr; prereq 3093, architecture major or #) Dittmar

Architecture examined within a general philosophical context: its nature, role, purpose, meaning; its definition; and its mode of operation as a discipline and in relation to other fields.

5852. ARCHITECTURE: THOUGHT AND DESIGN PROCESS. (3 cr; prereq 3093, architecture major or #) Dittmar

Architecture as a thought, creative, and transformational process; underlying attitudes, paradigms, models, and strategies and tools, and their potential, limitations, implications, formal outcome, and meaning.

5853. ARCHITECTURE: FORM ORDER AND MEANING. (3 cr; prereq 3093 or #, architecture major) Dittmar

Investigations into architectural form, order, and meaning relative to architecture as aesthetic, social, environmental, and technical subject. Current theories and concepts, their potential and implications.

5854. THE LANGUAGE OF ARCHITECTURE: SEMIOTICS, SYMBOLISM, AND METAPHOR.

(3 cr; prereq 3083, architecture major or #) Rockcastle
Communicative dimensions of architecture, especially as they relate to linguistic analogies. Historical perspective including current aspects of subject.

5855. TYPOLOGY AND ARCHITECTURE: THEORIES OF ANALYSIS AND SYNTHESIS. (3 cr; prereq 3083, architecture major or #) Rockcastle

Theoretical traditions and development of the use of typology in architecture. Works of Laugier, Quatremere De Quincy, Viollet-Le-Duc, Ledoux, Durand, Camillo Sitte, and Le Corbusier. Recent developments and theoretical positions of the "neorationalist" and "contextual" arguments for contemporary applications of typology.

5950. TOPICS IN ARCHITECTURE. (Cr ar; prereq 3093 or #)

Special topics of concern to the field of architecture.

5951. ARCHITECTURE AND BEHAVIOR. (3 cr; prereq 3083, architecture major or #) Robinson

Exploration of the relation between people and built environments; theoretical basis for exchange between designers and behavioral scientists, impact of knowledge of behavior on design and design process (design/evaluation/programming cycle), behavioral findings, problems of implementation. Guest lecturers and reading of materials from related disciplines.

5956. THE MEANINGS OF PLACE. (4 cr, §Geog 5856; prereq upper division architecture or landscape architecture major, grad or #) Clemence

Analysis of messages and meanings of our surroundings. Considers Twin Cities central districts, neighborhoods, and selected settings elsewhere. Direct experience.

5957. CLIMATE AND ARCHITECTURE. (4 cr; prereq architecture major, 3082 or #)

Climate as a context for architectural form and thought. Thermal comfort, synthesis and energy in architectural design in relation to humidity, temperature, wind, and solar radiation. Investigation of specific buildings/sites through graphic analysis, physical/computer simulation, and writings.

5970. DIRECTED STUDIES. (Cr ar; prereq #)

Individual programs to meet objectives not served in other courses.

Area Studies Programs

The Area Studies Programs house four major programs: East Asian Studies, Latin American Studies, Russian Area Studies, and South Asian and Middle Eastern Studies. Information about these departments is listed below.

Staff—Chair, Albert R. Tims, 225 Social Sciences; *Administrative Assistant and Adviser,* 232A Social Sciences

East Asian Studies

Professors Emeriti: Mather (EALL), Matsumoto (EALL), Turner (Political Science)

Professors: Benjamin (Political Science), Farmer (History), Hsu (Geography), Lee (Journalism and Mass Communication), Liu (EALL), Marshall (History), Poor (Art History), Taylor (History), S. Wang (EALL)

Associate Professors: Chow (CSCL), Ito (Economics), Jacobsen (EALL), Kagan (Music), Monnet (EALL), Waltner (History)

Assistant Professors: Bian (Sociology), Broadbent (Sociology), Chang (Journalism and Mass Communication), Decker (EALL), Kelliher (Political Science), Sza-trowski (EALL)

Adjunct Faculty—Tsuchida (Minority and Special Student Affairs), Zhou (East Asian librarian)

Teaching Specialist: Kido (Japanese)

East Asian studies deals with the literature, history, and culture of East Asian societies. The program's faculty is drawn from both humanities and social science disciplines. Students may develop programs with special

emphases in consultation with advisers. Students considering graduate work should begin their planning early to ensure appropriate preparation. Interested students may consult with the department's adviser, 232a Social Sciences.

All courses beyond the 1xxx level taken for major or minor programs in the East Asian Studies program must be taken A-F. Grades below a C-are not permitted. Exceptions must be petitioned to the program director.

General Education—Courses that have no language requirement are particularly suitable for nonmajors interested in East Asia and for satisfying group distribution requirements.

Study Abroad—Majors and minors in East Asian studies are strongly encouraged to spend some time, as much as a year if possible, living and studying in East Asia. The annual Minnesota Nankai Summer Intensive Chinese Language Institute is particularly recommended for those studying Chinese. This institute offers 15 University of Minnesota quarter credits for the summer. In addition to Nankai University in Tianjin, individual study experiences can be arranged in Taiwan and Japan. For information on options and procedures, consult with the undergraduate adviser in East Asian studies or see Foreign Study in this section.

B.A. Major Sequence—East Asian Studies

Required Preparatory Courses—Chn 1011-1012-1013 or Jpn 1011-1012-1013

Two courses selected from the following: 1063, 1461, 1462, 1463 (juniors and seniors may substitute Hist 3451, 3452, 3453, 3461, 3462, 3463)

Major Requirements—3211 (should be taken early in program)

Completion of intermediate Chinese or Japanese (Chn 3023 or Jpn 3023)

Students may choose either a social sciences or a humanities focus.

Senior Project: 5504 or 5504H

Social Sciences Focus: Three history courses selected from 3464, 3465, 3467, 3468, 3471, 3472, 3868, or 5xxx courses on China or Japan

Three social science courses from anthropology, economics, geography, political science, or sociology from the EAS approved list

Four additional courses from the EAS approved list, of which at least two must be selected from the literature/humanities sections

Humanities focus: Four literature courses selected from Chn 3161, 3162, 3163, 3165, or Jpn 3162, 3163, 3164, and 3165

Two approved humanities courses selected from departments such as East Asian studies, art history, music, comparative literature, humanities, etc.

Four additional courses in the social sciences from the EAS approved list, of which no more than two may be in history

See the Institute of Languages and Literatures for Japanese, Chinese, and East Asian languages and literatures course offerings.

Major project: normally completed in EAS 5504 or 5504H

Minor Sequence—East Asian Studies

Five courses at the 3xxx or 5xxx level, of which no more than two may be in language study. Courses must be selected from the approved list for the East Asian Studies major and must include one course from at least three of the disciplines represented.

Program approval must be obtained from the department.

East Asian Studies (EAS)

1032. RELIGIONS OF EAST ASIA. (4 cr, §RelS 3032)

Religious aspects of Confucianism, Taoism, Buddhism, and Shintoism as practiced in East Asia; Christian missions in East Asia.

1461. INTRODUCTION TO EAST ASIA: EARLY CIVILIZATION. (4 cr, §Hist 3461) Taylor
Rise and fall of the first great Chinese empire (Han) and early history of Vietnam, Korea, and Japan. Origins and development of Chinese society, government, and thought, and the introduction of Buddhism from India.

Major Requirements and Course Descriptions

1462. INTRODUCTION TO EAST ASIA: THE IMPERIAL AGE. (4 cr, §Hist 3462) Marshall, Waltner
Historical survey of early Japan and medieval Vietnam, Korea, and China from the T'ang empire until end of the 18th century. Diffusion of Chinese and Buddhist cultural forms and maturation of distinct societies in China, Japan, Vietnam, and Korea.

1463. INTRODUCTION TO EAST ASIA IN MODERN TIMES. (4 cr, §Hist 3463) Farmer, Marshall
Decline of Asian empires, rise of European and American imperialism; Asian responses: nationalism, social revolution, reintegration, modernization in China, Japan, Vietnam, Korea; retreat of European and American empires.

3013. INTRODUCTION TO FAR EASTERN ART. (4 cr, §ArH 1016, §ArH 3013) Poor
Major themes of Far Eastern art. Arts of China and Japan.

3211. GEOGRAPHY OF EAST ASIA. (4 cr, §Geog 3211, §Geog 5211) Hsu
Physical and human geography of China, Korea, Japan; population pressure, economic development, and international relations.

3315. THE JAPANESE ECONOMY. (4 cr, §Econ 3315; prereq Econ 1101, 1102) Ito
Economic development following contact with Western civilization. Current problems; population growth, capital formation, international economic relations.

3464. EARLY MODERN CHINA, 1350-1750. (4 cr, §Hist 3464, §Hist 5464) Farmer, Waltner
The Ming and Ch'ing empires; expulsion of Mongols and centralization of imperial power; high point of Confucian bureaucratic rule, commercial development, philosophical innovation, popular fiction, Manchu conquest, and early Western contacts.

3465. CHINA'S RESPONSE TO THE WEST, 1750-1911. (4 cr, §Hist 3465, §Hist 5465) Farmer, Waltner
Eighteenth-century demographic crisis; growth of Western trade, opium wars, and peasant rebellion; early reform efforts, cultural conflict with West, imperialism in China, and first phase of Chinese revolution.

3467. THE NATIONALIST REVOLUTION IN CHINA, 1900 TO PRESENT. (4 cr, §Hist 3467, §Hist 5467) Farmer
Failure of early republic, warlordism, new culture movement, and development of Chinese nationalism. Rise of Nationalist Party and intervention of Soviet Union, Japan, and United States. Taiwan and Republic of China.

3468. PEOPLE'S REPUBLIC OF CHINA: THE COMMUNIST REVOLUTION, 1900 TO PRESENT. (4 cr, §Hist 3468, §Hist 5468) Farmer
Introduction of Marxism in China, rise of Communist Party, and development of rural guerrilla movement. Career of Mao Tse-tung and developments in People's Republic: the Great Leap, Cultural Revolution, Gang of Four.

3471. 20TH-CENTURY JAPAN. (4 cr, §Hist 3471) Marshall
World War I and Japan's emergence as an industrial society and world power in the 1920s; the rise of militarism, World War II in the Pacific; political reform, economic resurgence, and cultural change in the post-war era.

3474. RISE OF MODERN JAPAN: 1853-1914. (4 cr, §Hist 3474) Marshall
Meiji revolution from Commodore Perry to eve of WWI: origins of constitutional monarchy, and industrial economy. Western influence and modern cultural change.

3481. MODERN JAPANESE SOCIETY. (4 cr, §Soc 3481; prereq introductory sociology course or #) Broadbent

Japanese social institutions, including family, education, business, and labor relations, government, and the status of women. How they differ from the West and have contributed to Japanese economic success.

3808. MUSIC IN EAST ASIA. (4 cr, §Mus 3808) Kagan
Religious, courtly, operatic, chamber, and folk music of China, Japan, Korea, and Tibet. Historical developments and cultural determinants of style, repertoire, and usage.

3868. ASIANS IN AMERICA: AN ETHNIC PERSPECTIVE. (4 cr, §Hist 3868) Tsuchida
Experience of Asians in the United States from 1850 to the present, examined from a minority perspective.

3941. THE JAPANESE CINEMA. (4 cr)
Major Japanese films as expressions of Japanese artistic traditions and national values.

3970. DIRECTED STUDIES. (1-15 cr; prereq #, Δ)
Guided individual reading or study.

3990. DIRECTED RESEARCH. (1-15 cr; prereq #, Δ)
Qualified students, with consent of instructor, work on a tutorial basis.

5481. COMPARATIVE ASIAN DEVELOPMENT. (4 cr; prereq course in sociology of development, Asian-related courses, or #) Broadbent
Comparison of the politicoeconomic and sociocultural institutions creating high-speed growth and other social and political effects in the East Asian area, focusing on Japan and the "four little tigers": Taiwan, South Korea, Hong Kong, and Singapore.

5504. SENIOR PROJECT. (4 cr; prereq senior in department or #)
Research methods, writing skills, and bibliography related to field of study.

5504H. SENIOR PROJECT: HONORS. (4 cr; prereq senior in department or #)
See description for 5504.

5970. DIRECTED STUDIES. (1-15 cr per qtr; #, Δ)
Qualified senior or graduate students may register for work on tutorial basis. Guided individual reading or study.

5990. DIRECTED RESEARCH. (1-15 cr per qtr; #, Δ)
Qualified senior or graduate students may register for work on tutorial basis.

Latin American Studies (LAS)

Staff—Director, 225 Social Sciences Building; *Administrative Assistant and Adviser,* 232A Social Sciences Building

Adjunct Faculty—Professors: Barnwell (Ecology, Evolution, and Biology), Barrett (Geography), Brauer (History), Duvall (Political Science), Gregersen (Forest Resources), Gudeman (Anthropology), Jara (Spanish and Portuguese), Knudson (International Relations), Kudrle (Humphrey Institute), Miller (Anthropology), Phillips (History), Ramosgascon (Spanish and Portuguese), Riedel (Music, Professor Emeritus), Roe (Agricultural and Applied Economics), Rose (Forest Resources), Schwartz (History), Shapiro (Speech-Communication), Sousa (Spanish and Portuguese), Spadaccini (Spanish and Portuguese), Stuthman (Agronomy), Vidal (Spanish and Portuguese), Zahareas (Spanish and Portuguese)

Associate Professors: Albert (Speech-Communication), Hastorf (Anthropology), Hendricks (Office of International Education), Himes (Human Development and Nutrition), Ingham (Anthropology), Jones (Spanish and Portuguese), Kaminsky (Women's Studies), Klee (Spanish and Portuguese), Mantini (Spanish and Portuguese), McCaa (History), Menanteau (Sociology), Morris (Design, Housing, and Apparel), Reis (Spanish and Portuguese), Rojas (Chicano Studies), Sullivan (Spanish and Portuguese), Valdés (History and Chicano Studies), Weil (Geography)

Assistant Professors: Montañó (Chicano Studies), Ocampo (Spanish and Portuguese), O'Connell (Spanish and Portuguese), Sikkink (Political Science)

Instructors and Academic Staff: Baizerman (Art Museum), Bornstein (Education), Hallewell (Ibero-American Bibliographer), Messenger (International Studies), Peterson (Foreign Studies), Weeks (Associate Librarian and Bibliographer)

This program, through a multidisciplinary combination of area and language coursework, is designed to prepare specialists in Latin American studies. The wide range of courses offered on the Twin Cities campus and in foreign study programs provides an excellent opportunity to pursue Latin American studies in a wide variety of disciplines.

You must plan your major or minor program in consultation with an adviser. If you have a special thematic or regional interest (e.g., human rights, communication, economic development, the Caribbean and the Guianas, the Andean countries, Brazil), you are encouraged to pursue it by designing a relevant cluster of courses.

Transfer credit, credit for directed research in non-LAS courses, or credit for courses not cross-listed with Latin American Studies may be applied to the major or minor when appropriate. History, Spanish, Portuguese, Chicano Studies, and other courses may be used to fulfill program requirements with adviser approval. The student's adviser determines the assignment to categories.

Opportunities for graduates of this program include teaching, research, government service, work in mass communication, banking, international management, or finance.

Study Abroad—Students are strongly urged to gain one or more field experiences in Latin America. Students can solidify their Spanish skills through one or two quarters of intensive language study in any Latin American country; there are multiple opportunities for such learning experiences in Mexico, for example. Students can also take regular courses at universities in other countries through programs such as ISEP; do structured field study through HECUA, MSID, or SPAN; or select from many non-

Major Requirements and Course Descriptions

University options. Appropriate credit can easily be applied toward either the major or the minor. For more information on opportunities and procedures, see Foreign Study.

B.A. Major Sequence

Required Preparatory Courses—LAS

3131; Span 1106 or Port 1006 (use of proficiency exams encouraged); LAS 3401, 3402, or 3403 (preferably in sequence)

Major Requirements—48 cr of 3xxx-5xxx level courses (in addition to 3131, 3401, 3402, 3403) distributed as follows:

at least 16 cr of social sciences

at least 8 cr of humanities

at least 4 cr of history

LAS 5120

All majors must complete a senior project in LAS 5504 or 5504H.

Depending on the topic, LAS 5101, 5120, 5530, and 5970 can be counted as social sciences or humanities

Students using Span 1106 to meet the language requirement may not apply more than 8 cr of Spanish literature in translation courses toward the major; students using Port 1006 to meet the language requirement may not apply more than 8 cr of Portuguese literature in translation courses toward the major.

All courses applied toward the major must be taken A-F and grades of C or better earned.

Up to 15 cr of independent study or directed research can be applied toward the major with adviser approval.

Minor Sequence

Required Preparatory Courses—LAS

3131; Span 1106 or Port 1006 (use of proficiency exams encouraged). If you select a Caribbean focus, you may petition to have a comparable level of French or Dutch accepted in lieu of Span 1106 or Port 1006.

Minor Requirements—20 cr (in addition to LAS 3131) distributed as follows:

4 cr of history

4 cr of humanities

8 cr of social sciences

4 additional cr

Introductory

3131f. INTRODUCTION TO LATIN AMERICAN STUDIES. (4 cr) Staff

Contributions by various disciplines to the study of the culture and political and economic systems of Latin America.

3401f. SURVEY OF LATIN AMERICAN HISTORY: COLONIAL PERIOD to 1800. (4 cr, §Hist 3401) McCaa, Schwartz

The pre-Hispanic and colonial period to 1800, with emphasis on social, cultural, and economic aspects.

3402w. SURVEY OF LATIN AMERICAN HISTORY: 1800-1929. (4 cr, §Hist 3402) McCaa, Schwartz

Development of new nations from independence to the emergence of dependent economies.

3403s. SURVEY OF LATIN AMERICAN HISTORY: 1929 TO PRESENT. (4 cr, §Hist 3403) McCaa, Schwartz

Contradictions of modern societies; economic expansion, dependency, population growth and the social crisis, democratic and authoritarian politics.

Social Sciences

3121. LATIN AMERICA. (4 cr, §Geog 3121) Weil

Physical and human geography of Latin America.

3134. MIDDLE AMERICA. (4 cr, §Geog 3131) Barrett

Physical and human geography of Mexico, Central America, and the Antilles. Internal and external area relationships.

3222. PEOPLES AND CULTURES OF MIDDLE AMERICA. (4 cr, §Anth 3222)

Indian-Spanish speaking peoples of Middle America. Processes of acculturation that have produced contemporary cultures of Mexico and Central America.

3250. ROLE OF RENEWABLE NATURAL RESOURCES IN DEVELOPING COUNTRIES. (2 cr, §FR 3250) Gregersen, Rose

International perspective on important resource issues, including integration of natural resources, social and economic considerations; issues and case studies.

3378. THIRD WORLD UNDERDEVELOPMENT AND MODERNIZATION. (4 cr, §Geog 3378) Porter, Scott, Sheppard, Weil

Processes underlying socioeconomic change in the Third World. Evolving global economy and internal spatial and socioeconomic conditions. Theories of modernization, development, and underdevelopment.

3451. INTERCULTURAL COMMUNICATION: THEORY AND PRACTICE. (4 cr, §Spch 3451; prereq planning an intercultural experience)
Theories of and factors influencing intercultural communication. Development of effective intercultural communication skills.

3452. COMMUNICATION AND THE INTERCULTURAL REENTRY. (4 cr, §Spch 3452; prereq return to home culture after intercultural experience)
Communication processes during return to home culture after intercultural experience. Focus on communication and understanding impact of intercultural experience as the basis for social change.

3512. ANDEAN ARCHAEOLOGY. (4 cr, §Anth 3512; prereq Anth 1101 or #)
Evolution of prehistoric society in the Andean region of South America, emphasizing major political and economic processes in the development of civilization.

3521. PREHISTORIC ARCHAEOLOGY OF MIDDLE AMERICA. (4 cr, §Anth 3521; prereq Anth 1101 or #)
Development of major features of prehistoric cultures of Mexico and Central America.

5131. COLONIAL MEXICO AND THE CARIBBEAN. (4 cr, §Geog 5131) Barrett
Exploration, discovery, settlement, livelihood, and circulation to about 1800.

5132. SOUTH AMERICA. (4 cr, §Geog 5132) Weil
Physical resources, population, agriculture, manufacturing, and transportation in countries of South America.

5479. LATIN AMERICAN GOVERNMENT AND POLITICS. (5 cr, §Pol 5479; prereq Pol 3051 or non-political science grad or #) Sikkink
Latin American political heritage, political processes, contemporary public policy issues, problems of social, economic, and political change in selected countries.

5820. THE MULTINATIONAL CORPORATION. (4 cr, §PA 5820)
Economic, political, social, and legal significance of the multinational corporation; major policy options open to both individual bodies and international bodies.

5865. HOUSING IN WORLD PERSPECTIVE I. (4 cr, §Hsg 5865; prereq Hsg 3863 or equiv)
Indigenous housing forms from around the world, with emphasis on village and rural housing; cultural differences; nature and quality of forms; application and implications for housing locally and nationally.

Directed and Special Studies

3970. DIRECTED STUDIES. (1-15 cr; prereq #, Δ)
Guided individual reading or study. Open to qualified students for one or more quarters.

3990. DIRECTED RESEARCH. (1-15 cr; prereq #, Δ)
Qualified students, with consent of instructor, work on a tutorial basis.

5101w. METHODS AND SOURCES FOR LATIN AMERICAN STUDIES. (4 cr per qtr; prereq jr or sr or grad, reading knowledge of Spanish or Portuguese or #)

Research sources, particularly bibliographic; reference materials and principal works. Prepares students for discipline-centered and interdisciplinary research.

5120s. PROSEMINAR: INTERDISCIPLINARY TOPICS IN LATIN AMERICAN STUDIES. (4 cr per qtr; prereq #; reading knowledge of Spanish or Portuguese sometimes required)

Interdisciplinary approach to specialized topics. Team-taught by teachers from two or more disciplines, with community resource people.

5504. SENIOR PROJECT. (4 cr; prereq sr in dept or #)
Research methods, writing skills, and bibliography related to field of study.

5504H. SENIOR PROJECT: HONORS. (4 cr; prereq sr in dept or #)
See description for 5504.

5530. TOPICS IN LATIN AMERICAN STUDIES. (4 cr) Staff
Topics in various disciplines of the social sciences and humanities focusing on Latin America.

5970. DIRECTED STUDIES. (Cr ar; prereq #)
Guided individual reading or study.

5990. DIRECTED RESEARCH. (Cr ar)

Russian Area Studies

Professors Emeriti: Donchenko, Prokopov, Rath, Turner

Professors: J. Adams (Geography), Liberman (German), Noonan (History), Pick (Institute of Child Development), Rudolph (History), Stavrou (History), Urness (James Ford Bell Library), Vecoli (IHRC), Weiss (German), Wright (History)

Associate Professors: Bashiri (SCALL), Beaven (Slavic Bibliographer, University Libraries), Jahn (SCALL), Polakiewicz (SCALL)

Assistant Professors: Corten (SCALL), Davidheiser (Political Science)

Instructor and Lecturer: Walter (Lecturer, Slavic Languages)

The Russian Area Studies program offers study of history, geography, politics, and economics of the Slavic world. The program offers a major and a minor in Russian area studies.

Major Requirements and Course Descriptions

See the Institute of Languages and Literatures for Russian, Polish, and Central Asian Studies course listings.

General Education—Courses recommended for general education are Russ 3421, 3422, 3511, 3512, 5211, CAS 3531

Study Abroad—The program recommends strongly that its undergraduates complement their coursework with firsthand knowledge of the former U.S.S.R., Eastern Europe, and/or Central Asia by studying abroad at least a semester. Several University-sponsored study abroad opportunities are available. These include summer, semester, and academic-year programs at St. Petersburg State University and a summer Polish program at Lublin, Poland. For further information on study abroad options and procedures, see Foreign Study.

B.A. Major Sequence—Russian Area Studies

Required Preparatory Courses—Russ 1101-1102-1103, 1104-1105-1106 or equiv

Major Requirements—Russ 3421-3422, Hist 3636-3637, a 2-qr sequence in social sciences (Geog 3181, 5181 or 5378, Pol 5471 recommended), Russ 3511-3512, minimum of 12 cr from 3xxx or 5xxx courses dealing with Russia, RAS 5504 or 5504H

Minor Sequence—Russian Area Studies

Required Preparatory Courses—Russ 1101-1102-1103 or equiv

Minor Requirements—Russ 3421 or 3422, Russ 3511 or 3512, Hist 3636 or 3637, Geog 3181, 5378 or Pol 5471, minimum of 4 cr from 3xxx or 5xxx courses dealing with Russia

3970. DIRECTED STUDIES. (1-15 cr per qtr; prereq #, Δ)
Guided individual reading or study. Open to qualified students for one or more quarters.

3990. DIRECTED RESEARCH. (1-15 cr per qtr; prereq #, Δ)
Qualified students, with consent of instructor, work on a tutorial basis.

5504. SENIOR PROJECT. (4 cr; prereq sr in department or #)
Research methods, writing skills, and bibliography related to field of study.

5504H. SENIOR PROJECT: HONORS. (4 cr; prereq sr in department or #)
See description for 5504.

5970. DIRECTED STUDIES. (1-15 cr per qtr; prereq #, Δ)
Qualified senior and graduate students may register for work on tutorial basis. Guided individual reading or study.

5990. DIRECTED RESEARCH. (1-15 cr per qtr; prereq #, Δ)
Qualified senior or graduate students may register for work on tutorial basis.

South Asian and Middle Eastern Studies

Professors: Barker, Junghare (SAMELC)

Assistant Professor: Staneslow (SAMELC)

Adjunct Faculty—*Professors:* Asher (Art History), Farah (History), Jha (CSCL), Kopf (History), Pandey (Social Work), Rowe (Anthropology), Schwartzberg (Geography), Tapp (Humanities)

Associate Professors: Bashiri (SCALL), Kagan (Music), Malandra (Classical and Near Eastern Studies), Miranda (Linguistics), Sampson (Political Science)

Assistant Professors: AshShareef (Afro-American and African Studies), Goodwin-Tomar (Anthropology), Klinger (Humanities), Youssif (Middle East Library)

Lecturers: D. Johnson (Ames Library), J. Johnson (MacArthur Program)

The South Asian and Middle Eastern Studies program focuses on the cultural traditions, and contemporary problems of Afghanistan, Bangladesh, India, Iran, Nepal, Pakistan, Sri Lanka, Turkey, Iran, and the Arab world. Flexible major and minor programs in South Asian and Middle Eastern Studies are designed to meet the needs and interests of individual students.

Study Abroad—The study abroad experience can provide an important comparative perspective within various cultural paradigms. Various study abroad opportunities are available and appropriate courses taken

abroad can be applied toward a major. See also Foreign Study.

B.A. Major Sequence—South Asian and Middle Eastern Studies

Major Requirements—*Language and Literature Option*: two years (six quarters) in one language of the Middle East or South Asia

- Four 3xxx-5xxx literature courses
- Two 3xxx-5xxx religion and philosophy courses
- Three 3xxx-5xxx social science and humanities courses

Area Studies Option: Three 3xxx-5xxx literature courses

- Two 3xxx-5xxx religion and philosophy courses
- Four 3xxx-5xxx social science and history courses

MidE 5504 or SoAS 5504 Senior Project

If you are pursuing the area studies option, you are urged, but not required, to fulfill the CLA language requirement with study of a South Asian or Middle Eastern language.

Programs must be designed in consultation with an adviser.

See the Institute of Languages and Literatures for South Asian and Middle Eastern Languages and Cultures course offerings.

Minor Sequence—South Asian and Middle Eastern Studies

Minor Requirements—Five 3xxx-5xxx courses with a minimum of one course from literature and one from the social sciences and history

If you are pursuing a minor in South Asian and Middle Eastern Studies, you are urged to fulfill the CLA language requirement with a South Asian or Middle Eastern language.

Middle Eastern Studies (MidE)

3970. DIRECTED STUDIES. (1-15 per qtr; prereq #, Δ)

Guided individual reading or study. Open to qualified students for one or more quarters.

3990. DIRECTED RESEARCH. (1-15 per qtr; prereq #, Δ)

Qualified students, with consent of instructor, work on a tutorial basis.

5504. SENIOR PROJECT. (4 cr; prereq sr in department or #)

Research methods, writing skills, and bibliography related to field of study.

5504H. SENIOR PROJECT: HONORS. (4 cr; prereq sr in department or #)

See description for 5504.

5970. DIRECTED STUDIES. (Cr ar)

Guided individual reading or study.

5990. DIRECTED RESEARCH. (Cr ar)

South Asian Area Studies (SoAS)

3970. DIRECTED STUDIES. (1-15 per qtr; prereq #, Δ)

Guided individual reading or study. Open to qualified students for one or more quarters.

3990. DIRECTED RESEARCH. (1-15 per qtr; prereq #, Δ)

Qualified students, with consent of instructor, work on a tutorial basis.

5504. SENIOR PROJECT. (4 cr; prereq sr in department or #)

Research methods, writing skills, and bibliography related to field of study.

5504H. SENIOR PROJECT: HONORS. (4 cr; prereq sr in department or #)

See description for 5504.

5970. DIRECTED STUDIES. (Cr ar)

Guided individual reading or study.

5990. DIRECTED RESEARCH. (Cr ar)

Art History (ArH)

Staff—Chair, Frederick Asher, 108a Jones Hall; *Director of Undergraduate Studies,* Frederick Cooper, 5 Jones Hall

Professors: F. Asher, Canedy, Cooper, Marling, McNally, Nelson, Poor, Weisberg

Associate Professors: Haxthausen, Silberman, Steyaert, Stoughton

Assistant Professor: C. Asher

The Department of Art History seeks to help students develop an awareness of the visual environment through historical exam-

Major Requirements and Course Descriptions

ination of architecture, sculpture, painting, and other visual art forms.

For advanced work in art history, the department offers professionally oriented courses leading to a B.A. degree. M.A. and Ph.D. degrees in art history are also offered through the Graduate School.

General Courses—All 1xxx courses and most 3xxx courses are for general audiences.

Study Abroad—The department strongly encourages students considering either a major or minor in art history to include study in a foreign country into their program. Such study not only enriches the student through firsthand experience of another culture and language, it offers an invaluable opportunity for direct study of major artistic monuments. Credit for appropriate coursework can be applied toward both the major and minor in art history. For further information, see the Foreign Study section of this bulletin.

B.A. Major Sequence

(All courses must be taken A-F)

Required Preparatory Courses—4 cr in art practice (consult the director of undergraduate studies). For students entering the college before fall 1986, at least 5 qtrs of a second language (i.e., Route I) are needed; for all others, the current language requirement (6 qtrs) supersedes the department's requirement.

Major Requirements—37 cr, including 3008, 3009, 3011, 3012, 3971; a minimum of 20 cr in five additional art history courses, including one in film or folk art or a non-Western field and one 5xxx-level lecture. All courses must be taken A-F.

Each student must complete a major project consisting of: a) a preliminary research paper in a designated "project course," which may be either Art History 3930 (the Junior/Senior Seminar) or any 5xxx course (to be selected by agreement with the instructor); b) Art History 3971, Major Project Research Paper. The major project course must be selected in consulta-

tion with the director of undergraduate studies.

Minor Sequence

Required Preparatory Course—1002 or equiv

Minor Requirements—20 cr selected to fulfill one of the following options:

1. **General Coverage of the Field**—Complete 3008, 3009, 3011, 3012, and one 3xxx or 5xxx course in non-Western art (e.g., Asian, Mesoamerican, African, Oceanic).

2. **Support of a Major Field**—Complete three of four survey courses of Western art (3008, 3009, 3011, 3012) and two courses at the 3xxx or 5xxx level that relate to your major field. The two courses should be in a single subfield of art history (e.g., in modern art for a major in studio arts, in classical/ancient art for a major in classical civilization).

Directed studies, independent study, and S-N credits may not be applied toward the minor. The minor program must be approved by the director of undergraduate studies.

1001. INTRODUCTION TO THE VISUAL ARTS.

(4 cr, §3001) Staff

Basic problems of art. Major visual arts examples as a basis for study of the nature of art, problems of design, materials and techniques, presented topically rather than chronologically.

1002. INTRODUCTION TO THE HISTORY OF ART.

(4 cr) Staff

The history of art, examined through selected monuments from the major periods of art from Paleolithic to modern times, covering both Western and non-Western cultures.

1016. INTRODUCTION TO ASIAN ART.

(4 cr)

F Asher, Poor
Major themes of Indian and Far Eastern art.

1921. INTRODUCTION TO FILM STUDY.

(4 cr, §CLit 1921) Silberman

Fundamentals of film language and major theories of cinema, presented through detailed analysis of several films.

3001. PRINCIPLES OF THE VISUAL ARTS.

(4 cr, §1001) Staff

Similar to 1001, but with expanded reading and contact with works of art.

3008. HISTORY OF ANCIENT ART. (4 cr, §Clas 3008) F Asher, Cooper, McNally

Architecture, sculpture, and painting of selected early cultures; stress on influences contributing to the development of Western art.

3009. HISTORY OF MEDIEVAL ART. (4 cr)

Steyaert

Medieval architecture, painting, and sculpture from early Christian through Gothic periods.

3011. HISTORY OF RENAISSANCE AND

BAROQUE ART. (4 cr) Canedy, Stoughton

Major monuments in architecture, sculpture, and painting from the early 14th century through the baroque period.

3012. HISTORY OF 19TH- AND 20TH-CENTURY

ART. (4 cr) Haxthausen, Nelson, Weisberg

Major monuments and concepts of the modern period: sculpture, architecture, painting, and prints.

3013. INTRODUCTION TO FAR EASTERN ART.

(4 cr, §EAS 3013) F Asher, Poor

Major themes of Far Eastern art. The arts of China and Japan (not all-inclusive).

3014. ART OF INDIA. (4 cr) C Asher, F Asher

Indian sculpture and architecture from the prehistoric Indus Valley civilization through the major historical periods. Hindu and Buddhist art from 300 B.C. to A.D. 1200.

3015. SURVEY OF ISLAMIC ART. (4 cr) C Asher

Architecture, painting, and minor arts of the Islamic world.

3017. ISLAMIC CULTURE. (4 cr) C Asher

Investigates Islamic cultures, emphasizing visual arts and literature. Analysis of original sources for understanding the most significant cultural developments in this civilization, extending from Spain to the Indian subcontinent.

3035. MYTHOLOGY IN WESTERN ART. (4 cr, §Clas 3035)

Selected figures and events from classical mythology as ancient artists first depicted them and as they have reappeared in later Western art.

3142. ARTS OF EGYPT AND THE NEAR EAST.

(4 cr, §Clas 3142) Cooper, McNally

The arts and architecture of Egypt, Mesopotamia, and Persia from prehistoric times to the conquests of Alexander the Great.

3152. GREEK ART AND ARCHAEOLOGY. (5 cr,

§Clas 3152; offered alt yrs) Cooper, McNally

Architecture, sculpture, painting, and archaeology from 1050 B.C. to 31 B.C.

3162. ROMAN ART AND ARCHAEOLOGY. (5 cr,

§Clas 3162) Cooper, McNally

Roman art and material culture: origins, change, continuity, "progress" or "decay" in the later empire.

3252. HISTORY OF EARLY CHRISTIAN RE-

GIONS AND BYZANTINE ART. (4 cr, §Clas 3252)

Architecture, sculpture, and painting in eastern Christian regions, from founding to fall of Constantinople. Meaning and broader cultural context in which works of art were created.

3303. BAROQUE AND ROCOCO PAINTING IN

FRANCE. (4 cr, §5357) Stoughton

French painting of the 17th and first half of the 18th centuries.

3325. MICHELANGELO: HIS WORK IN ITS

TIMES. (4 cr) Canedy

Michelangelo's sculpture, painting and architecture within context of his times; emphasis on use of relevant preparatory drawings, in facsimile, and contemporary texts, in translation, to understand the work's inception and ultimate character.

3422. HISTORY OF 19TH-CENTURY GRAPHIC

ARTS. (5 cr, §5422; offered alt yrs) Weisberg

History and theory of the creation and evolution of lithography, social caricature (e.g., Daumier, Gavarni), the revival of etching at mid-century, and the emergence of color lithography at the turn of the century (e.g., Toulouse-Lautrec, Vuillard, Bonnard). Major artistic figures and revolutionary nature of the new media invented. Use of local print collections to strengthen the visual component.

3484. THE ART OF PICASSO. (4 cr) Weisberg

Works of Picasso in all media. Emphasis on Blue, Rose, Cubist, Classical, and later periods of Picasso's development against innovations in Modern European art of the early 20th century.

3575. ART OF WALT DISNEY. (4 cr, §AmSt 3575)

Marling

Disney's cartoons, films, and theme parks in comparison to the "high" art of the period; assessment of his influence on American art and society.

3576. POPULAR ART IN AMERICA. (4 cr) Marling

A formal and iconographic study of vernacular and mass art in the United States after 1865, including illustration, billboards, the automobile, roadside environments, subdivisions, cemeteries, and amusement parks.

3577. THE ARTS IN AMERICA: COLONIAL ERA

THROUGH CIVIL WAR. (4 cr) Marling

The American architecture, painting, sculpture, and the popular and decorative arts in their social, historical, and cultural context.

3578. THE ARTS IN AMERICA: CIVIL WAR

THROUGH THE GREAT DEPRESSION. (4 cr)

Marling

For description, see 3577.

3579. THE ARTS IN AMERICA: GREAT DEPRES-

SION TO THE PRESENT. (4 cr) Marling

For description, see 3577.

Major Requirements and Course Descriptions

3921-3922. ART OF THE FILM. (4 cr per qtr) Silberman

The history of the motion picture as an art form; major films, directors, genres, and styles.

3930. JUNIOR-SENIOR SEMINAR. (4 cr; prereq art history major, jr or sr) Staff

A major art-historical topic, figure, period, or genre. Designed for advanced majors in art history.

3940. TOPICS IN ART HISTORY. (2-5 cr) Staff

3950. TOPICS IN ART HISTORY. (4-5 cr)

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq #)

Guided individual reading or study.

3971. MAJOR PROJECT. (1 cr; prereq art history major, #; Comp 3013 recommended)

Completion of a research paper begun in a 5xxx-level "project course."

3975. DIRECTED MUSEUM EXPERIENCE.

(1-3 cr; prereq #; S-N only)

Internship or docentship in an approved program in an art institution or museum. Open to both majors and nonmajors. Must consult with director of undergraduate studies.

5052. EARLY MEDIEVAL ARCHITECTURE. (4 cr, §Arch 5052; prereq Arch 1021 or #; 3 lect and 1 seminar hrs per wk) Alchermes

History of the development of architecture and urban design during early Christian, Byzantine, Islamic, Carolingian, and Romanesque periods in the Near East and Western Europe until A.D. 1150.

5054. RENAISSANCE AND BAROQUE ARCHITECTURE. (4 cr, §Arch 5054; prereq 1021 or #; 3 lect and 1 seminar hrs per wk)

History of development of architecture and urban design in Italy, Spain, France, Germany, and the Low Countries from 1400 until the French Revolution.

5055. 18TH-CENTURY ARCHITECTURE AND THE ENLIGHTENMENT. (4 cr, §Arch 5055; prereq Arch 1021 or #; 2 lectures per wk)

Architecture, urban planning, and garden design in Europe, 1700-1850.

5056. MODERN ARCHITECTURE. (4 cr, §Arch 5056; prereq Arch 1021 or #; 3 lect and 1 seminar hrs per wk)

Architecture and urban design from early 19th-century sources in Europe and America to World War II.

5061. CONTEMPORARY ARCHITECTURE. (4 cr, §Arch 5061; 3 lect and 1 seminar hrs per wk)

Developments, theories, stylistic movements, and trends in architecture and urban design from World War II to the present

5102. CLASSICAL GREEK ART. (5 cr, §Clas 5102)

Architecture, sculpture, and painting in Greece from Persian Wars to conquests of Alexander.

5104. ROMAN ARCHITECTURE. (5 cr, §Clas 5104; prereq jr or sr or #) Cooper, McNally

Buildings in Rome and the empire from the fifth century B.C. to the fourth century. Major archaeological sites.

5105. ROMAN PAINTING AND MOSAICS. (5 cr, §Clas 5105; prereq jr or sr or #) McNally

Roman painting and mosaics, specific problems; sites such as Pompeii and Antioch.

5106. GREEK PAINTING. (5 cr, §Clas 5106; prereq 5103 or #; offered every third year) McNally

Research and analysis in classical art as applied to study of vases; original objects and sources.

5107. ROMAN SCULPTURE. (4 cr, §Clas 5107; prereq jr or sr or #) Cooper, McNally

Sculpture of Rome and its provinces from the 1st century B.C. to the 4th century; the role of sculpture in Roman politics and religion.

5108. GREEK ARCHITECTURE. (4 cr, §Clas 5108; prereq jr or #)

Archaic and classical examples of religious and secular architecture and their setting in major archaeological sites.

5111. BRONZE AGE ART AND ARCHITECTURE IN GREECE, CIRCA 3000-1100 B.C. (4 cr, §Clas 5111; prereq one ancient art or archaeology course) Cooper

Artistic and architectural forms in the Neolithic period in the Aegean area and the Cycladic, Minoan, and Mycenaean cultures.

5113. ARCHAIC GREEK ART. (4 cr, §Clas 5113; prereq jr or #)

Architecture, sculpture, and painting in Greek lands from 9th through 5th centuries B.C. Examination of material remains of Greek culture; archaeological problems such as identifying and dating buildings; analysis of methods and techniques.

5120. FIELD RESEARCH IN ARCHAEOLOGY. (3-6 cr per qtr, §Clas 5120; prereq #)

Field excavation, survey, and research at archaeological sites in the Mediterranean area. Techniques of excavation and exploration; interpretation of archaeological materials.

5175. THE TOPOGRAPHY OF A MEDIEVAL CITY. (4 cr, §Clas 3175)

Study of Constantinople, a world capital and imperial residence for more than a millennium. Original and translated texts and archaeological evidence used to reconstruct individual monuments and broader patterns of urban life and urbanistic development from circa 200 until Turkish conquest of 1453.

5234. GOTHIC SCULPTURE OF THE CATHEDRAL AGE. (5 cr; prereq 3009 or grad student or #) Steyaert

Sculpture in France and Germany from 1150 to 1350. Emphasis on stylistic evolution.

5252. HISTORY OF EARLY CHRISTIAN AND BYZANTINE ART. (4 cr, §Clas 5252)

Architecture, sculpture, and painting in eastern Christian religions from founding to fall of Constantinople in the 15th century. Emphasis on meaning and broader cultural context in which works of art were created.

5307. 15TH-CENTURY ITALIAN ARCHITECTURE, SCULPTURE, AND PAINTING. (4 cr; prereq 3011 or grad or #) Canedy

Early Renaissance art from Brunelleschi to Bellini; development of the "repertory" of monument types that survived to modern times.

5313. ITALIAN HIGH RENAISSANCE ARCHITECTURE, SCULPTURE, AND PAINTING. (4 cr; prereq 3011 or grad or #) Canedy

Leonardo da Vinci, Michelangelo, Raphael, Titian, and lesser artists working in Florence, Rome, Venice, and northern Italy. Painting emphasized.

5314. LATER 16TH-CENTURY ITALIAN ARCHITECTURE, SCULPTURE, AND PAINTING. (5 cr; prereq 3011 or grad or #) Canedy

Mannerism and other trends between the high Renaissance and the baroque.

5315. DRAWINGS AND GRAPHICS OF THE RENAISSANCE. (5 cr; prereq grad or #) Canedy

Drawings and graphics from the early Renaissance to the baroque. Original works.

5324. 15TH-CENTURY PAINTING IN NORTHERN EUROPE. (5 cr; prereq jr or sr or grad or #) Steyaert

Painting in the Netherlands, France, and Germany during the late Gothic period; its influences.

5326. 16TH-CENTURY PAINTING IN NORTHERN EUROPE. (4 cr; prereq 3011 or grad student or #) Steyaert

Northern Renaissance painting in Germany, the Netherlands, and France.

5346. BAROQUE ART IN ITALY AND SPAIN. (5 cr; prereq 3011 or grad or #; offered alt yrs) Stoughton

Italian sculpture, painting, and architecture, and Spanish painting of the 17th century.

5347. BAROQUE ART IN ENGLAND, FRANCE, AND THE LOWLANDS. (5 cr; prereq 3011 or grad or #; offered alt yrs) Stoughton

French architecture, painting, and sculpture, Flemish and Dutch painting, and English painting and architecture of the 17th century. Major artists: Rembrandt, Rubens, Poussin, Jones.

5357. 18TH-CENTURY ART IN FRANCE. (4 cr, §3303; prereq 3011 or grad or #; offered alt yrs) Stoughton

Rococo and neoclassical painting, sculpture, and architecture.

5358. 18TH-CENTURY ART IN ITALY, GERMANY, AND AUSTRIA. (4 cr; prereq 3011 or grad student or #) Stoughton

Italian painting, sculpture, and architecture; German and Austrian architecture.

5422. HISTORY OF 19TH-CENTURY GRAPHIC ART. (5 cr, §3422; prereq one 3xxx-level art history course or grad or #) Weisberg

For description, see 3422.

5431. AGE OF REVOLUTION: FRENCH PAINTING, 1789-1848. (5 cr; prereq one 3xxx-level art history course or grad or #) Weisberg

Major styles and movements in France and their leading exponents: neo-classicism—David; romanticism—Corot and Delacroix; early landscape painting—the Barbizon group.

5432. REALISM TO IMPRESSIONISM: FRENCH PAINTING, 1848-1886. (5 cr; prereq one 3xxx-level art history course or grad or #) Weisberg

Major movement of French painting from the realism of Courbet through the end of impressionism. Special emphasis placed on the roots of popular imagery, the critical study of realism, and the radical innovations of impressionism.

5433. THE ADVENT OF MODERNISM: LATER 19TH-CENTURY FRENCH PAINTING, 1886-1905. (5 cr; prereq one 3xxx art history course or grad or #) Weisberg

Major styles and movements: postimpressionism, symbolism, fin de siècle Jugendstil.

5443. 19TH-CENTURY GERMAN PAINTING. (5 cr; prereq one art history course or grad or #) Haxthausen

Major movements, groups, and artists in the Germanic lands: the Nazarenes, Bredermeier, the Leibl Circle, Runge, Friedrich, Menzel, Marées, Böcklin.

5454. ART NOUVEAU. (5 cr; prereq one 3xxx-level art history course or grad or #) Weisberg

History and evolution of the art nouveau movement in France, England, Belgium, Germany, Austria, Scotland, and the United States. Innovations in architecture, graphics, and the decorative arts; examination of the continental variants of the style (e.g., liberty style, Jugendstil). Major promoters of the movement (e.g., S. Bing, Liberty & Company, J. Meier-Graefe) and pioneers of modern design (e.g., William Morris).

5463. EARLY 20TH-CENTURY PAINTING. (5 cr; prereq one American or modern art course or #) Haxthausen

Topics or movements in painting, mainly before the mid-1920s.

Major Requirements and Course Descriptions

5471. ART IN CENTRAL EUROPE, 1893-1918.

(5 cr; prereq 3012, grad or #) Haxthausen
Painting, sculpture, and graphic art in German-speaking Europe from the founding of the secessions to the end of World War I: impressionism, jugendstil, expressionism. Style, criticism, theory, and art institutions. Artists include Corinth, Munch, Kirchner, Nolde, Klimt, Kokoschka, Kandinsky, Marc.

5472. ART IN CENTRAL EUROPE BETWEEN THE WORLD WARS. (5 cr; prereq 3012 or grad or #) Haxthausen

Major artistic tendencies in German-speaking Europe from 1919 to 1938: Dada, the Bauhaus, realism. Style, theory, contemporary criticism, art institutions, relations between art and politics. Artists include Beckmann, Dix, Grosz, Kandinsky, Klee, Schwitters.

5521. 20TH-CENTURY ART IN THE UNITED STATES. (5 cr; prereq 4 cr of art history) Marling, Silberman

Contemporary movements in American painting and sculpture beginning in early 20th century with "the eight" and the Armory Show, 1913.

5535. ART IN THE UNITED STATES. (5 cr; prereq 4 cr of art history or #; offered alt yrs) Marling
Painting and sculpture in the United States. Key works and artists from early settlement to the early 20th century.

5546. AMERICAN ARCHITECTURE FROM 1860 TO 1914. (5 cr; prereq sr or grad or #) Archer, Marling

American architectural developments and European influences from the Civil War to about 1914. New materials and structural methods. Hunt, Richardson, McKim, Mead and White, Sullivan, early Wright, others.

5643. PREHISTORIC ART OF NORTHERN EUROPE. (4 cr) Nelson

Art north of the Alps from the Ice Age through the Celtic period. Cave painting, sculpture, funerary architecture, ceramics, and metalwork.

5645. FOLK ARTS OF SCANDINAVIA. (4 cr; offered alt yrs) Nelson

Wood carving, metalwork, decorative painting, weaving, stitching, and domestic architecture of rural Scandinavia; origins in pagan and medieval art.

5711. JAPONISME: THE JAPANESE INFLUENCE ON WESTERN ART, 1854-1910. (5 cr; prereq one 3xxx-level art history course or grad or #) Weisberg

Impact of Japanese art and culture on the West from 1854 to 1910. Influence of Japanese prints and decorative arts on succeeding generations of European painters, printmakers, and decorative designers with special emphasis on the postimpressionist generation and the craftsmen at the end of the century. Promoters of Japonisme, including critics, writers, and entrepreneurs.

5725. CERAMICS IN THE FAR EAST. (4 cr; offered alt yrs) Poor

Ceramic art in the Far East: China, Korea, and Japan, from Neolithic times to the present.

5765. EARLY CHINESE ART. (5 cr; prereq 9 cr art history or #; offered alt yrs) Poor

Ancient ceramics and ritual bronzes, early Buddhist sculpture, early Chinese painting.

5766. CHINESE PAINTING. (5 cr; prereq 9 cr art history or #; offered alt yrs) Poor

Major works from the 4th to the 17th centuries. Development of the landscape tradition and the literary genre of later Chinese painting.

5767. JAPANESE PAINTING. (4 cr; prereq jr or sr or #; offered alt yrs) Poor

Japanese pictorial arts from earliest to modern times; development of indigenous traditions.

5769. CONNOISSEURSHIP IN ORIENTAL ART.

(5 cr; prereq jr or sr or #; offered alt yrs) Poor
Examination of Oriental art objects in local collections.

5775. EARLY INDIAN ART. (5 cr; prereq 4 cr of art history or #) F Asher

Sculpture and architecture from the Indus Valley civilization through the Kushana period.

5776. THE ART AND ARCHITECTURE OF HINDU INDIA. (5 cr; prereq 4 cr of art history or #) F Asher

Development of sculpture and temple architecture from the earliest Hindu images through the great period of temple building, about the 13th century. Perspectives of both form and meaning.

5777. PAINTING OF INDIA. (5 cr; prereq 4 cr of art history or #) C Asher

Painting, beginning with the early tradition of mural painting; miniature painting from the 12th century onward.

5781. AGE OF EMPIRE: THE MUGHALS, OTTOMANS, SAFAVIDS. (4 cr) C Asher

Development of art and architecture in three contemporary Islamic empires, Mughals of India, Safavids of Iran, and Ottomans of Turkey.

5783. ART OF ISLAMIC INDIA. (4 cr) C Asher

Development of art and architecture in the Indian subcontinent from period of Islamic domination to Colonial period.

5785. EASTERN ISLAMIC WORLD: IRAN TO INDIA. (4 cr) C Asher

Development of art and architecture in Iranian dominated Eastern Islamic realm: Iran, southern Soviet Union, Afghanistan, and Indian subcontinent from inception of Islam to present.

5787. ART OF THE WESTERN ISLAMIC WORLD. (4 cr) C Asher

Development of art and architecture in western Islamic world from inception of Islam to present.

5895. METHODS AND RESEARCH IN ART HISTORY. (4 cr; prereq sr art history major or grad, #; for highly qualified undergrad majors intending to pursue professional training and incoming MA majors) Haxthausen, staff

Types of analysis—formal, stylistic, iconographic, others. Techniques of research.

5911. ART OF MESOAMERICA. (4 cr, §AmSt 5920; prereq jr or sr or #)

5922. FILM GENRES. (4 cr; prereq 3921-3922 or #) Silberman

Westerns, gangster movies, comedies, musicals, science fiction, horror films, political films, film noir, and documentaries.

5925. HISTORY OF PHOTOGRAPHY AS ART.

(4 cr; prereq 3012 or #) Silberman
Origins and development of photography, with attention to technology and cultural impact. Major aesthetic achievements in photography from its beginning to present.

5940. TOPICS: ART OF THE FILM. (4 cr per qtr; prereq 3921-3922 or #) Silberman

Film and society. Sex and violence, race and ethnicity in the cinema; films of the 1930s, 1950s, or 1960s.

5950, 5960. TOPICS IN ART HISTORY. (2-5 cr per qtr [10 cr max]; prereq #) Staff
Topics specified in the *Class Schedule*.

5970. DIRECTED STUDIES. (1-5 cr per qtr; prereq sr or #) Staff

Guided individual reading or study.

5990. DIRECTED RESEARCH. (1-5 cr per qtr; prereq sr or #) Staff

Arts, Studio (ArtS)

Staff—*Chair*, Wayne Potratz, 210 Art Building; *Director of Undergraduate Studies*, Karl Bethke, 232 Art Building (612/625-3050); *Coordinator of Advising*, Cindy Cribbs, 206 Art Building (612/625-1848); *Director of Graduate Studies*, Tom Rose, 225 Art Building (612/625-7893)

Professors Emeriti: MacKenzie, Myers

Professors: Bethke, Hoard, Katsiaticas, Potratz, Rose, Rowan

Associate Professors: Baldwin, Caglioti, Cowette, Feinberg, Gray, Hallman (on leave

1992-93), Henkel, Krepps, Lane, Lucey, Lyon, Pharis, Roode

The Department of Studio Arts provides in-depth instruction in drawing and painting, sculpture, printmaking, photography, ceramics, and glassworking, emphasizing the development of visual awareness through involvement in the creative process.

Students must pay a fee for some studio arts courses to cover part of the cost of expendable materials.

General Education—1401 introduces the concerns, media, and environment of the practicing artist, and concepts of creating visual art in contemporary and historical contexts. It should be taken before or concurrently with other 1xxx-level courses. It is a prerequisite for 3xxx-level courses.

Grades—All courses for the major and minor, whether required or elective, must be completed with C or higher grades. All courses for the major must be taken A-F, except seminars and the senior project.

Study Abroad—The department strongly encourages students to incorporate a foreign study experience into their undergraduate program. Appropriate credits from such study easily can be applied toward a studio arts major or minor. Information on study abroad options and procedures is available in the Department of Studio Arts Adviser's Office and also in the Foreign Study section of this bulletin.

B.A. Major Sequence

Required Preparatory Courses—One 1xxx art history course

1101, 1301 or 1302, 1401, 1404

12 cr from 1102, 1301 or 1302, 1510, 1520, 1530, 1540, 1701, 1811, 1812

Major Requirements—At least 28 3xxx-5xxx studio arts cr

8 3xxx-5xxx art history cr

3444: Senior Project

B.F.A. Major Sequence

This program, leading to a four-year professional degree, offers an intensive concentra-

Major Requirements and Course Descriptions

tion in studio arts work. It is designed for students planning to enter professional work or an M.F.A. program. Part of the liberal arts background includes the second language requirement. However, if you entered CLA before fall 1986 or transferred into CLA with 39 or more credits before fall 1988, you are excused from the language requirement upon admission to the B.F.A. program. Contact your college office if you have questions about the B.F.A. language requirement.

Admission—Entrance is usually limited to students with B averages in studio arts courses. You should apply for admission no later than your final junior quarter. Application forms are available at the studio arts office. Admission is based on scholastic record, slides of work, and faculty evaluations.

Accepted students are subject to review, and candidacy may be terminated if performance is unsatisfactory. In case of termination, you may transfer to the B.A. program.

A detailed statement of admission and program requirements is available in the department office.

Required Preparatory Courses—1101, 1301 or 1302, 1401, 1404, 1510 or 1520 or 1530 or 1540, 1701, 1811 or 1812

8 additional 1xxx studio arts cr

Major Requirements—24 3xxx-5xxx cr in one studio arts specialization

16 additional 3xxx-5xxx studio arts cr

16 art history cr (8 cr must be at the

3xxx-5xxx level)

5400: Concepts in Contemporary Art

8 cr related to artistic expression

Exhibition during final quarter

Minor Sequence

Required Preparatory Courses—1401, 8 1xxx-level studio arts cr

4 art history cr

Minor Requirements—16 3xxx- or 5xxx-level studio arts cr

Introductory Courses

1101f,w,s,su. DRAWING I. (4 cr) Caglioti, Cowette, Feinberg, Gray, Katsiaficas, Lyon, Roode, Rowan
Introduction to studio work and elements of drawing; contemporary and traditional methods; various drawing mediums.

1102f,w,s,su. DRAWING II. (4 cr; prereq 1101) Caglioti, Cowette, Feinberg, Gray, Katsiaficas, Lyon, Roode, Rowan
Work from life, nature and imagination; color and pictorial structure.

1301f,w,s,su. SCULPTURE. (4 cr) Baldwin, Lucey, Potratz, Rose
Structure; form and space. Direct construction in metal.

1302f,w,s,su. SCULPTURE. (4 cr) Baldwin, Lucey, Potratz, Rose
Structure; form and space. Clay, plaster, wood. Mold-making and casting.

1401f,w,s,su. INTRODUCTION TO STUDIO ARTS. (4 cr) Lyon

Concepts of visual art-making in contemporary and historical contexts. The concerns, media, and environment of the practicing artist. Aesthetic foundation for beginning courses. The creative process, visual expression, criteria. Open to all students.

1404f,w,s,su. COLOR. (4 cr; prereq 1101) Feinberg, Katsiaficas, Lyon, Rowan
Structure and interaction of color and its visual implications in creative context.

1510f,w,s,su. PRINTMAKING: INTAGLIO. (4 cr per qtr [8 cr max]) Bethke, Krepps
Intaglio printing processes. Etching, engraving, and collagraphic techniques in creative context.

1520f,w,s,su. PRINTMAKING: LITHOGRAPHY. (4 cr per qtr [8 cr max]) Krepps
Planographic printing processes from stones and metal plates. Image making, processing, printing, and presentation in creative context.

1530f,w,s,su. PRINTMAKING: RELIEF. (4 cr per qtr [8 cr max]) Bethke
Traditional and contemporary relief printing media. Lino, woodcut, cardboard, metal, and letterpress techniques, and their aesthetic applications.

1540f,w,s,su. PRINTMAKING: SCREEN. (4 cr per qtr [8 cr max]) Bethke, Krepps
Traditional and contemporary screen printing media. Paper stencil, tusche and glue, cut stencil, and photo stencil techniques, and their aesthetic applications.

1701f,w,s,su. PHOTO MEDIUM. (4 cr) Hallman, Henkel
Contemporary and historical use of photography. Use of camera, film development, enlarging. The creative process.

1811f,w,s,su. CERAMICS: HANDBUILDING. (4 cr)
Hoard, Lane, Pharis
Introduction to hand-building techniques in clay for individual creative expression.

1812f,w,s,su. CERAMICS: WHEELTHROWING.
(4 cr) Hoard, Lane, Pharis
Introduction to wheel-throwing techniques for individual creative expression.

Intermediate Courses

3105f,w,s,su. PAINTING. (4 cr; prereq 1101, 1102, 1401, 1404) Caglioti, Cowette, Feinberg, Katsiaticas, Lyon, Roode, Rowan
Introduction to studio work in painting. Fundamentals of visual art making via the paint media. Emphasis on visual language.

3110f,w,s,su. DRAWING. (4 cr per qtr [12 cr max]; prereq 1101, 1102, 1401) Caglioti, Cowette, Feinberg, Gray, Katsiaticas, Lyon, Roode, Rowan
Various media and skills. Elements of drawing in relation to the human figure, nature, still life.

3120f,w,s,su. PAINTING. (4 cr per qtr [12 cr max]; prereq 1101, 1102, 1401, 1404, 3105, 4 cr 3110 or ¶3110) Caglioti, Cowette, Feinberg, Katsiaticas, Lyon, Roode, Rowan
Continued problems in painting. Individual projects. Emphasis on developing personal direction.

3130. WATERCOLOR. (4 cr per qtr [12 cr max]; prereq 1101, 1102, 1401, 1404) Caglioti, Rowan
Transparent watercolor, gouache, casein, tempera. Figure, still life, landscape.

3131. NATURE OF ABSTRACTION. (4 cr; prereq 1101, 1102, 1401, 1404) Rowan
Two-dimensional projects in varied media in which representational images from nature are transposed toward abstract syntheses through specific attention to visual elements (i.e., space and volume, line, value pattern, scale, color, depth, and mass).

3301. SCULPTURE: DIRECT METAL. (4 cr; prereq 1301, 1302, 1401) Baldwin
Welding and brazing.

3302. SCULPTURE: SPATIAL PROJECTS AND PROBLEMS. (4 cr; prereq 1301, 1302, 1401) Rose
Methods of organizing space. Physical relationships between objects, elements, or materials, and how they can be manipulated to affect a space.

3303. SCULPTURE: CAST METAL. (4 cr; prereq 1301, 1302, 1401) Potratz
Lost wax and sand casting in bronze, aluminum, and iron.

3304. SCULPTURE: WOOD AND STONE. (4 cr; prereq 1301, 1302, 1401) Lucey
Wood and stone construction, assemblage, and arrangement.

3305. SCULPTURE: KINETICS. (4 cr; prereq 1301, 1302, 1401) Baldwin
Constructions, kinetics, electronics.

3306. PERFORMANCE ART. (4 cr; prereq 1401) Lucey
Development of individual performance artworks and research of pioneers of this art form.

3307. SCULPTURE: MODELING AND CASTING. (4 cr; prereq 1301, 1302, 1401) Baldwin, Potratz, Rose
Modeling with clay and other materials from human figure and other subjects; moldmaking with plaster and rubber; casting in plaster and other materials.

3430. PAPER: PULP TO PLASTIC EXPRESSION. (4 cr per qtr [12 cr max]; prereq 1401, one lxxx studio arts course) Krepps
Creative and traditional approaches to papermaking.

3510. PRINTMAKING: INTAGLIO. (4 cr per qtr [12 cr max]; prereq 1401, 4 cr of 1510) Bethke, Krepps
Intaglio techniques on metal and collagraph. Embossing.

3520. PRINTMAKING: LITHOGRAPHY. (4 cr per qtr [12 cr max]; prereq 1401, 4 cr of 1520) Krepps
Planographic techniques on stones and plates.

3530. PRINTMAKING: RELIEF. (4 cr per qtr [12 cr max]; prereq 1401, 4 cr of 1530) Bethke
Relief printing techniques; emphasis on color processes.

3540. PRINTMAKING: SCREEN. (4 cr per qtr [12 cr max]; prereq 1401, 4 cr 1540) Bethke, Krepps
Screen printing techniques, emphasis on color and image development.

3710. PHOTOGRAPHY. (4 cr per qtr [12 cr max]; prereq 1401, 1701 or Jour 3301) Hallman, Henkel
Photographic controls and processes. Related photosensitive media. Creative processes suited to individual interests.

3810. INTERMEDIATE CERAMICS. (4 cr per qtr [12 cr max]; prereq 1401, 1811, 1812) Hoard, Lane, Pharis
Advanced design problems with introduction to glaze and clay experimentation. Emphasis on personal expression.

3820. GLASSWORKING. (4 cr per qtr; prereq 1401, 1301 or 1302 or 1811 or 1812) Lane
Glassworking, both hot and cold procedures. Emphasis on conceptual and aesthetic application of glass as an art medium.

3830. GLASS: INTRODUCTION TO NEON. (4 cr; prereq 1401) Lane
Forming of neon tubing for artistic expression.

Major Requirements and Course Descriptions

Advanced Courses

5110f, w, s, su. DRAWING. (4 cr per qtr [16 cr max]; prereq 12 cr of 3110) Caglioti, Cowette, Feinberg, Gray, Katsiaticas, Lyon, Roode, Rowan
Drawing in all mediums from life.

5120f, w, s, su. PAINTING. (4 cr per qtr [16 cr max]; prereq 12 cr of 3120) Caglioti, Cowette, Feinberg, Katsiaticas, Lyon, Roode, Rowan
Various media. Individual problems.

5130f, w, s, su. WATERCOLOR. (4 cr per qtr [16 cr max]; prereq 12 cr of 3160) Caglioti, Rowan
Advanced watercolor techniques, aesthetic direction. Individual concepts and development of sensibilities.

5310. SCULPTURE: DIRECT METAL. (4 cr per qtr [16 cr max]; prereq 3301) Baldwin

5320. SCULPTURE: SPATIAL PROJECTS AND PROBLEMS. (4 cr per qtr [16 cr max]; prereq 3302) Rose
Physical relationships between sculptural objects, elements, or materials, and how these can be manipulated to affect a space.

5330. SCULPTURE: CAST METAL. (4 cr per qtr [16 cr max]; prereq 3303) Potratz
Lost wax and sand casting in bronze, aluminum, iron.

5340. SCULPTURE: WOOD AND STONE. (4 cr per qtr [16 cr max]; prereq 3304) Lucey
Wood and stone construction, assemblage, and arrangement.

5350. SCULPTURE: KINETICS. (4 cr per qtr [16 cr max]; prereq 3305) Baldwin
Constructions, kinetics, electronics.

5360. PERFORMANCE ART. (4 cr; prereq 1401) Lucey
Advanced individual performance artworks.

5370. SCULPTURE: MODELING AND CASTING. (4 cr; prereq 3307) Baldwin, Potratz, Rose
Modeling with clay and other materials. Moldmaking, casting in plaster and other materials.

5430. PAPER: PULP TO PLASTIC EXPRESSION. (4 cr per qtr [16 cr max]; prereq 12 cr 3430) Krepps
Creative and traditional approaches to papermaking.

5510. PRINTMAKING: INTAGLIO. (4 cr per qtr [16 cr max]; prereq 12 cr of 3510) Bethke, Krepps
Color processes. Intaglio and combined techniques.

5520. PRINTMAKING: LITHOGRAPHY. (4 cr per qtr [16 cr max]; prereq 12 cr of 3520) Bethke, Krepps
Color printing and planographic techniques.

5530. PRINTMAKING: RELIEF. (4 cr per qtr [16 cr max]; prereq 12 cr of 3530) Bethke
Relief processes. Letterpress and combined techniques.

5540. PRINTMAKING: SCREEN. (4 cr per qtr [16 cr max]; prereq 12 cr of 3540) Bethke, Krepps
Screen processes and combined techniques.

5550. PRINTMAKING: EXPANDED APPROACHES. (4 cr per qtr [16 cr max]; prereq 12 cr of 3430 or 35xx or #)
For description, see 3550.

5710. PHOTOGRAPHY. (4 cr per qtr [16 cr max]; prereq 12 cr of 3710) Hallman, Henkel
Individual work in photographic controls, processes; related photosensitive media.

5810. CERAMICS. (4 cr per qtr [16 cr max]; prereq 12 cr of 3810) Hoard, Lane, Pharis
Aesthetic awareness and development; techniques and materials.

5820. GLASSWORKING. (4 cr per qtr [16 cr max]; prereq 12 cr 3820) Lane
Forming glass from molten state. Creative expression with technical understanding.

5821. CERAMIC MATERIALS ANALYSIS. (4 cr; prereq 8 cr of 3810) Pharis
Glaze analysis and calculation of glaze types, formulation, materials. Procedures for investigating unidentified materials.

5830. GLASS: NEON. (4 cr per qtr [16 cr max]; prereq 12 cr of 3830) Lane
Advanced emphasis on conceptual and aesthetic applications of neon tube manipulation; applications to other media.

Advanced Entrance Courses

These courses, for advanced students only, provide technical background in specific media outside of the student's primary area. The courses are intended for graduate students in studio arts and in other disciplines, junior and senior nonmajors, and transfer students. They are not open to undergraduate majors. Because each section of a course is devoted to different subject matter, a student may register in more than one section of a course.

5190. DRAWING AND PAINTING. (4 cr per qtr [16 cr max]; prereq #, Δ)

5390. SCULPTURE. (4 cr per qtr [16 cr max]; prereq #, Δ)

5590. PRINTMAKING. (4 cr per qtr [16 cr max]; prereq #, Δ)

5790. PHOTOGRAPHY. (4 cr per qtr [16 cr max]; prereq #, Δ)

5890. CERAMICS AND GLASSWORKING. (4 cr per qtr [16 cr max]; prereq #, Δ)

Special Courses

3444. SENIOR PROJECT. (2 cr; prereq studio arts major, #, Δ ; S-N only)

3970. DIRECTED STUDIES. (1-5 cr per qtr [8 cr max]; prereq 24 cr in studio arts, #, Δ , \square)
Guided individual work.

3980. DIRECTED INSTRUCTION. (1-5 cr per qtr [8 cr max]; prereq #, Δ , \square)
Students assist in teaching courses they have completed.

5400. CONCEPTS IN CONTEMPORARY ART. (4 cr; prereq studio arts major or #)

5970. DIRECTED STUDIES. (1-5 cr per qtr [12 cr max]; prereq 24 studio arts cr, #, Δ , \square)
Guided individual work.

Workshop Courses

When offered, area designation follows course number and title in the *Class Schedule* (e.g., ArtS 3420—Workshop: Kilnbuilding).

1420. WORKSHOP. (1-5 cr per qtr)

3420. WORKSHOP. (1-5 cr per qtr)

5420. WORKSHOP. (1-5 cr per qtr)

Honors Courses

3411H. HONORS TUTORIAL. (2-4 cr; prereq honors candidate, #, Δ)
Individual consultation with faculty member on visual work, research project, presentations, or papers.

3412H. HONORS TUTORIAL. (2-4 cr; prereq honors candidate, #, Δ)
Individual consultation with faculty member on visual work, research project, presentations, or papers.

3413H. HONORS: CROSSMEDIA PROJECT. (2-4 cr; prereq honors candidate, #, Δ)
Projects that involve two or more instructors or areas in studio arts, or that involve two or more departments or disciplines within the University.

3414H. HONORS: CROSSMEDIA PROJECT. (2-4 cr; prereq honors candidate, #, Δ)
Projects that involve two or more instructors or areas in studio arts, or that involve two or more departments or disciplines within the University.

3415H. HONORS: THESIS. (2 cr; prereq honors candidate, #, Δ)
Advanced problems in studio and research. Exhibition.

3416H. HONORS: THESIS. (2 cr; prereq honors *summa* candidate, ¶3415H)
Research paper for *summa* candidates; must be taken concurrently with 3415H.

Astronomy (Ast)

Institute of Technology

Staff—Chair, T. W. Jones, 358 Physics;
Director of Undergraduate Studies, T. J. Jones, 355 Physics; *Director of Graduate Studies,* L. Rudnick, 373 Physics

Regents' Professor Emeritus: Ney

Professors: Davidson, Dickey, Gehrz, Humphreys, T. J. Jones, T. W. Jones, Kuhl, Rudnick, Stein, Woodward

Assistant Professor: Skillman

Astronomy activities include observations of stars, interstellar matter, galaxies, other constituents of the universe, and formulation of the laws that govern them.

A bachelor of science degree in astrophysics is offered in the Institute of Technology.

A bachelor of arts in astronomy is offered in CLA. Both programs can serve as preparation for graduate school, work in industry, or secondary school teaching.

General Education—1011 is a descriptive course open to all students; 1021H is a slightly more mathematical version for those who have had high school trigonometry and physics or chemistry. 1201 is a second course primarily for nonmajors. Other courses are designed for majors in physics, astrophysics, and astronomy.

If you intend to satisfy CLA's group B laboratory requirements by taking 1011 or 1021H, you must complete the associated laboratory (1015 or 1025H) as well as the lecture course. 1015 or 1025H may be taken either concurrently or subsequently.

B.A. Major Sequence

Required Preparatory Courses—1021H; Math 1251-1252-1261 or equiv; Physics 1251-1252-1253

Major Requirements—3051, 5162 and one other 5xxx-level astronomy course; Math

Major Requirements and Course Descriptions

3251, 3252, 3261 or equiv; Physics 3011, 3512-3513, 3601, 5021, 5023, 5024

Major project: At least 3 cr of Ast 5990—Directed Research

Majors are encouraged to take additional 5xxx-level astronomy, 3xxx- and 5xxx-level physics, mathematics and/or computer science courses. This is especially true of students planning to pursue graduate work in astronomy.

1011f,w,s,su. DESCRIPTIVE ASTRONOMY. (4 cr, §1021H)

Survey of the sun, moon, planets, stars, and material between the stars; description of the galaxy and universe.

1015f,w,s,su. DESCRIPTIVE ASTRONOMY LABORATORY. (1 cr, §1025H; prereq high school algebra; high school trigonometry recommended; 2 lab hrs per wk)

Laboratory in conjunction with 1011. Occasional night observing sessions required.

1019. OUR CHANGING PLANET. (4 cr, §Geo 1019, §EEB 1019)

Interrelationships among Earth's subsystems—solid earth, oceans, atmosphere and biosphere, and solar and galactic super-systems. Way the Earth works by interactions of natural cycles, their rates, feedback, and human impact.

1021H. INTRODUCTION TO ASTRONOMY. (4 cr, §1011; prereq high school trigonometry and physics or chemistry)

Solar system, stars, galaxies, and cosmology. A more mathematical and physical discussion than 1011.

1025Hf,w,s. INTRODUCTION TO ASTRONOMY LABORATORY. (1 cr, §1015; prereq high school algebra, trigonometry, physics or chemistry; 1 lab per wk)

Laboratory in conjunction with 1011 or 1021H. Occasional night observing sessions required. A more mathematical and physical discussion than 1015.

1201w,s. TOPICS IN MODERN ASTROPHYSICS. (4 cr; prereq 1011 or 1021H or equiv, #)

Current research problems in astronomy and astrophysics.

3051. INTRODUCTION TO ASTROPHYSICS. (4 cr; prereq 1 yr calculus, Phys 1291 or 1341 or #)

The solar system, galaxy, and extragalactic universe. How information is obtained; conclusions from observations.

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq #, Δ)

Independent, directed study in observational and theoretical astrophysics of interest to the student and a faculty member.

5061-5062-5063. COMPUTATIONAL METHODS IN THE PHYSICAL SCIENCES. (4 cr, §Phys 5061-5062-5063; prereq for 5061—upper division or grad student or #, prereq for 5062—Phys/Ast 5061 or #, prereq for 5063—Phys/Ast 5062 or #; 2 lect, 6 lab hrs per wk)

Introduction to solution of problems in the physical sciences with computer programs. Emphasis on selected numerical methods and mapping problems onto computational algorithms. Techniques illustrated through examples chosen from classical mechanics, electrodynamics, fluid dynamics. Computer experiments involving these techniques carried out on SUN work stations in the physics building lab.

5161. ASTROPHYSICS OF DIFFUSE MATTER. (4 cr; prereq 3051, Phys 5024 or #)

Physical processes in diffuse matter—gas dynamics, MHD, excitation process, and equilibria in atoms and molecules. Emission and absorption by gas and dust. Dynamic processes in interstellar space, HII regions, and molecular clouds.

5162. STARS AND STELLAR EVOLUTION. (4 cr; prereq 3051, Phys 3501 or 3513 or #)

Stars and stellar evolution. Stellar atmospheres, structure and evolution of single stars. White dwarfs, neutron stars, black holes, novae, and supernovae. Formation of stars.

5163. GALACTIC ASTRONOMY AND THE INTERSTELLAR MEDIUM. (4 cr; prereq 3051 or #)

Structure, kinematics, and evolution of the Milky Way galaxy and its constituents, stars, star clusters, and the interstellar medium. Observed properties of the galaxy.

5164. EXTRAGALACTIC ASTRONOMY. (4 cr; prereq 5163 or #)

Structure and evolution of external galaxies. Classification, stellar and gaseous contents, kinematics and dynamics, the extragalactic distance scale, clusters, galactic nuclei, and associated activity.

5165. COSMOLOGY. (4 cr; prereq Phys 3513 or #)

Large scale structure and history of the universe. Newtonian and relativistic world models, the Big Bang model, microwave background, physics of the early universe; cosmological tests, measurement of Hubble constant and deceleration parameter, galaxy formation.

5201s. METHODS OF EXPERIMENTAL ASTROPHYSICS. (4 cr; prereq 3051, Phys 3513; 2 lect and 6 lab hrs per wk)

Introduction to contemporary techniques and instrumentation in astronomy. Astronomical observations, including data acquisition and instrument control using the facilities at O'Brien Observatory.

5321. RADIATION PROCESSES IN ASTROPHYSICS. (4 cr; prereq Phys 5024, 5102 or #)

Physics of radiation by atoms and molecules. Radiation by energetic charged particles and plasma emission processes. Emission and absorption of radiation by solid particles. Transfer of continuum radiation and formation of spectral lines. Application to various astrophysical environments.

5362. STELLAR ASTROPHYSICS. (4 cr; prereq 5321 or #)

Theory of stellar structure and evolution. Basic physics and equations of stellar structure. Application to stellar interiors and atmospheres. Nucleosynthesis.

5421. HIGH ENERGY ASTROPHYSICS. (4 cr; prereq 3051, Phys 5024, 5101 or #)

Energetic phenomena in the universe. Supernovae, pulsars, radio and X-ray stars. Radio galaxies and quasars. Acceleration of high energy particles. Observational basis and current theoretical understanding.

5990. DIRECTED RESEARCH. (3 cr min; prereq #, Δ)

Independent research in observational and/or theoretical astrophysics under the direction of a faculty member. For senior astrophysics and astronomy majors.

Behavioral Biology

See Ecology, Evolution, and Behavior.

Biblical Studies

Staff—Chair of Minor Committee, Jonathan Paradise, 330 Folwell Hall (625-5353)

Professor: Tzvee Zahavy (Classical and Near Eastern Studies)

Associate Professors: Paradise (Classical and Near Eastern Studies), Daniel Reisman (Classical and Near Eastern Studies), Philip Sellev (Classical and Near Eastern Studies)

The Biblical Studies minor focuses on study of the Old and New Testaments in translation or in the original languages. First-year Hebrew or Greek is required if you choose to study original texts in one of these languages. The courses required for the minor may be found in this section of the bulletin under Classical and Near Eastern Studies.

Minor Sequence

Minor Requirements—Clas 3072; two courses from ANE 3501, 3502, 3505

One course from each of the following groups:

1. ANE 3501, 3502, 3505, 3251; Hebr 3201, 3202, 3203, 3204, 3205

2. Clas 5080 or Grk 3120

The minor program must be approved by a faculty member in biblical studies.

Biochemistry (BioC)

College of Biological Sciences

Staff—Head, Norma Allewell, 140 Gortner Laboratory of Biochemistry; *Director of Undergraduate Studies,* James Fuchs

Professors: Allewell, Anderson, Bloomfield, Conti-Tronconi, Flickinger, Fuchs, Lovrien, Nelsestuen, Raftery, Tsong, Wood, C. Woodward

Associate Professors: Bernlohr, Das, Schottel

Assistant Professors: Barry, Wackett

Biochemistry is the study of the molecules, especially macromolecules such as proteins and nucleic acids, that occur in living organisms.

A major leading to the B.S. degree is available through the College of Biological Sciences.

See also the listings under Biology.

General Education—Courses especially appropriate for nonmajors include BioC 3001, 3031

3001. ELEMENTARY BIOLOGICAL CHEMISTRY.

(4 cr; prereq one qtr college chemistry) Principles of chemistry important to biological systems. Organic, inorganic, and physical chemistry needed to understand biochemistry. An alternative prerequisite to BioC 3031—Survey of Biochemistry.

3031. SURVEY OF BIOCHEMISTRY. (4 cr; prereq two qtrs organic chemistry or 3001)

Structure, function, and nomenclature of biological molecules including proteins, carbohydrates, lipids, and nucleic acids. Mechanism of enzyme and coenzyme reactions. Metabolic pathways. Nucleic acid function and protein synthesis.

3960. RESEARCH TOPICS IN BIOCHEMISTRY.

(1 cr per qtr; S-N only) Lectures and discussions on current research in the department.

Major Requirements and Course Descriptions

Biol 5001. BIOCHEMISTRY. (4 cr; prereq Biol 1009, 12 cr organic chemistry or #)

Biochemistry and biophysics of cells; emphasis on enzyme catalysis, cellular energetics, biosynthesis of cellular constituents, and cellular regulatory mechanisms.

5002. BIOCHEMISTRY TOPICS. (3 cr; prereq 3031 with grade of B or better or Biol 5001)

Biol 5001 and BioC 5002 constitute a two-quarter sequence for undergraduate and graduate students lacking physical chemistry and serve as prerequisites for certain advanced courses.

5025. LABORATORY IN BIOCHEMISTRY. (2 cr; prereq 3031 with grade of B or better or Biol 5001 or §Biol 5001)

Discussions of techniques and problem-solving approaches illustrated with laboratory experiments and demonstrations.

5301. ECOLOGICAL BIOCHEMISTRY. (3 cr; prereq 3031 with grade of B or better or Biol 5001 or #)

Biochemistry of environmental processes. Topics include biochemistry of organismal interactions, biological responses to environmental stress, gene transfer in the environment, and effects and fate of environmental toxins.

5525. PHYSICAL BIOCHEMISTRY: SOLUTION STRUCTURE AND INTERACTIONS OF BIOLOGICAL MACROMOLECULES. (4 cr, §Chem 5525, §MdBc 5525; prereq 2 qtrs physical chemistry, Biol 5001 or equiv)

Physical chemistry of equilibrium, transport and scattering phenomena in solution, with application to proteins and nucleic acids. Intermolecular forces, macromolecular dynamics, conformational transitions, binding thermodynamics; methods for determining biopolymer size and shape, including sedimentation, diffusion, viscosity, electrophoresis, and scattering.

5526. PHYSICAL BIOCHEMISTRY: SPECTROSCOPIC METHODS I. (4 cr, §Chem 5526, §MdBc 5526; prereq 2 qtrs physical chemistry)

Lectures on fundamental spectroscopic principles with emphasis on the development of magnetic resonance theory used in the study of biological macromolecules.

5527. BIOCHEMISTRY: SPECTROSCOPIC METHODS II. (4 cr, §Chem 5527, §MdBc 5527; prereq 2 qtrs physical chemistry, BioC/MdBc 5526)

Applications of optical and magnetic resonance techniques to the study of structure and dynamics in proteins, lipids, nucleic acids, and synthetic analogs.

5528. PHYSICAL BIOCHEMISTRY: ENZYME KINETICS. (4 cr, §Chem 5528, §MdBc 5528; prereq 2 qtrs physical chemistry; BioC/MdBc 5751 or Biol 5002 or equiv desirable)

Theory and application of steady state and transient kinetics to the study of enzymes, enzyme systems, and cellular regulation.

5529. PROTEIN STRUCTURE AND FOLDING.

(4 cr, §Chem 5529, §MdBc 5529; prereq Biol 5001 or equiv; 1 qtr physical chemistry or #)
Protein structure, stability, folding, and molecular modeling. Emphasis on results from X-ray crystallography, solution thermodynamics, NMR, computer graphics, and protein engineering.

5744. ANALYTICAL BIOCHEMISTRY. (4 cr; prereq lab work in analytical and organic chemistry, #)

Principal techniques of biochemistry experimental work; instrumentation and methods for isolation and characterization of proteins, lipids, and carbohydrates. Chromatography, electrophoresis, spectrophotometry, potentiometry, and fluorimetry.

5751-5752-5753. GENERAL BIOCHEMISTRY. (4 cr per qtr, §MdBc 5751-5752-5753; prereq 3 qtrs organic chemistry, 2 qtrs physical chemistry, 1 qtr biochemistry or #)

Comprehensive discussion of structure, function, metabolism, and metabolic regulation of components in biological systems.

5970. DIRECTED STUDIES. (Cr ar; prereq #, Δ)

Individual study of selected topics or problems with emphasis on selected readings and use of scientific literature.

5990. DIRECTED RESEARCH. (Cr ar; prereq #, Δ)

Lab or field investigation of selected areas of research.

College of Biological Sciences

The basic sciences, which are administratively housed in the College of Biological Sciences (CBS), also are part of the College of Liberal Arts; any CBS courses listed in this bulletin can be applied toward CLA degrees. CLA students may take up to 28 credits of coursework offered by other colleges. The credits may be applied toward CLA degrees and in some cases may be used to fulfill general education requirements. Consult your college office adviser for a list of courses from other colleges approved for general education requirements.

Descriptions of courses offered by the College of Biological Sciences also may be found in the bulletin of that college.

Information about requirements for entering the College of Biological Sciences can be found in the third section of this bulletin.

Biology (Biol)*College of Biological Sciences*

Staff—Dean, P. T. Magee, *Associate Dean*, Sally Jorgensen, 123 Snyder Hall; *Director of Student Services*, Kathleen Peterson, 223 Snyder Hall

Biologists concern themselves with the fundamental properties of living things, from the interactions of molecules unique to life through the maintenance and integration of organisms to the interactions of populations in space and time.

The College of Biological Sciences offers a program leading to the bachelor of arts (B.A.) degree in the College of Liberal Arts and one leading to the bachelor of science (B.S.) degree in the College of Biological Sciences. Information about the B.S. program may be found in the *College of Biological Sciences Bulletin*. Students interested in satisfying requirements for admission to programs in the health sciences will find that a biology major provides an appropriate way to do so. Consult an adviser in the CBS Office of Student Services (612/624-9717) for more information.

Students interested in biology should also check for courses listed under Biochemistry (BioC); Ecology, Evolution, and Behavior (EEB); Genetics and Cell Biology (GCB); Microbiology (MicB); and Plant Biology (PBio).

General Education—Courses especially appropriate for nonscience and nonbiology majors include BioC 3001, 3031; Biol 1008, 1009, 1101, 1103, 1106, 1301, 3051, 3112; PBio 1009, 1012; EEB 3001, 3111; GCB 3002, 3008, 3022.

B.A. Major Sequence

Students must arrange an appointment with an adviser in the CBS Office of Student Services (612/624-9717, 223 Snyder Hall, St. Paul campus) to declare a major in biology.

Required Preparatory Courses—Biol 1009 or exemption examination; Chem 1051-

1052; Math 1251-1252 (grades of C or better required in preparatory courses)

Required Major Courses—

1. Math 1261; a two-qtr statistics sequence (Stat 3011 and 3012 or PubH 5415 and 5450 or PubH 5450 and CSci 3104 or PubH 5450 and HInf 5430) with grades of C or above, may be substituted for Math 1261.

2. Chem 3301, 3302, 3305, 3306

3. Phys 1104-1105-1106 with 1107-1108-1109 or Phys 1251, 1252, 1253, (1254 optional); a two-qtr sequence in physics (1041-1045, 1042-1046) plus a 4 or 5-cr course in mathematics, statistics, computer science, or physical science may be substituted by petition with approval of the major adviser and the CBS Scholastics Committee. Petitions for substitution should be submitted to 223 Snyder Hall, St. Paul campus.

4. Biol 3011, 3012, 5001, 5003, 5004, 5013, 5041

5. 9 additional 3xxx-5xxx cr in biological science, including:

a. Two courses involving laboratory or field work in biological sciences. Consult the *College of Biological Sciences Bulletin* for a list of acceptable courses.

b. A major project: minimum of 4 cr in 5970 or 5990 taken in the biochemistry; ecology, evolution, and behavior; genetics and cell biology; microbiology; or plant biology departments. A maximum of 4 cr of 5970 or 5990 may be counted toward requirement 5.

(Courses from any of the following areas can be applied toward the major: biochemistry; biology; ecology, evolution, and behavior; genetics and cell biology; microbiology; and plant biology.)

Composition: one of the following courses is recommended to fulfill the upper division composition requirement: Comp 3015, Comp 3027, Comp 3033, Rhet 3562

Minor Sequence

Minor Requirements—Minimum of 15 3xxx-5xxx cr chosen from courses carrying

Major Requirements and Course Descriptions

the following designators: BioC, Biol, EEB, GCB, MicB, PBio, Phsl

One course about animals (Biol 1106 or 3011) and one course about plants (Biol 1103 or 3012)

The minor program must be approved in the CBS Office of Student Services, 223 Snyder Hall (612/624-9717).

1008. INTRODUCTORY BIOLOGY: AN EVOLUTIONARY APPROACH. (4 cr)

Evolution as the unifying principle in biology; includes organization and change in the biological world and the origin of humans.

1008H. INTRODUCTORY BIOLOGY: AN EVOLUTIONARY APPROACH. (4 cr)

For description, see 1008. Intended for honors students or their equivalent who plan to major in a life science discipline.

1009. GENERAL BIOLOGY. (5 cr)

Introduction to the principles of biology. The cell, metabolism, heredity, reproduction, ecology, and evolution. Includes laboratory.

1009H. GENERAL BIOLOGY. (5 cr; prereq honors division or 3-4 yrs high school math, high school chemistry or Δ)

For description, see 1009. Intended for honors students or their equivalent who plan to major in a life science discipline.

1101f,w,s. HEREDITY AND HUMAN SOCIETY.

(4 cr, §GCB 3002 [no cr if taken after 5003 or GCB 3022]; for students in programs not directly related to biological sciences)

Principles of heredity and their social and cultural implications.

1103w,s,su. GENERAL BOTANY. (5 cr, §3012; prereq 1009; students who plan to major in biology in CLA or any bioscience major in CBS should take 3012) Koukkari, Wetmore

Organization levels of plants; plant function, growth and development, reproduction. Lab.

1106. GENERAL ZOOLOGY. (5 cr; prereq 1009)

Schmid, staff

Survey of animal phyla; structure, function, behavior, adaptation, and evolutionary relationships. Lab.

1301w. HUMAN REPRODUCTION AND DEVELOPMENT. (4 cr; prereq 1009 or equiv)

Human development from gametogenesis to senescence. Ovulation, sperm release, fertilization, transit of the early embryo to the uterus, implantation, fetal membranes, cellular differentiation, organogenesis, birth, adolescence, puberty, and senescence. Congenital defects, birth control, multiple births, and human cytogenetics in relation to development. *In vitro* fertilization.

1951, 1952, 1953. BIOLOGY COLLOQUIUM. (1 cr/f, 1 or 2 cr/w,s; for prospective majors; S-N only) Introduction to diversity of biology through seminars, lab tours, undergraduate research, trips to Itasca Biological Station, and interaction with other biology students and faculty.

3009H. GENERAL BIOLOGY: A QUANTITATIVE APPROACH. (5 cr, §1009H; prereq college-level chemistry, at least 1 yr calculus and physics, permission of CBS, CLA or IT honors office)

Introduction to the principles of biology with emphasis on quantitative aspects. The cell, metabolism, physiology, heredity, ecology, and evolution. Includes laboratory.

3011. ANIMAL BIOLOGY. (5 cr, §1106; prereq 1009, Chem 1052)

Comparison of ways different phyla have solved similar physiological problems. Laboratory includes survey of major animal groups and physiological experiments.

3012. PLANT BIOLOGY. (5 cr, §1103, §3812; prereq 1009, Chem 1052)

Plant diversity and evolution; structure and function of the plant cell and the whole organism; growth and development of plants. Lab.

3051. BIOLOGY AND THE FUTURE OF THE EARTH. (4 cr; bioscience students may not apply these credits toward the major)

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.

3111. ANIMAL BIOLOGY. (4 cr, §3011; prereq 1009, 1106, Chem 1052)

Lecture covering the comparative physiology of animal groups; coordination, movement, support, excretion, reproduction.

3950H. UNDERGRADUATE SEMINAR. (2 cr per qtr; S-N only)

Each quarter, different members of the faculty lead discussions on topics of current interest.

3960H. HONORS SEMINAR. (1 cr per qtr; prereq Δ ; limited to participants in the CBS Honors Program; S-N only)

Oral reports on topics of current interest to biologists; progress reports on laboratory and field research by participants.

3980. DIRECTED INSTRUCTION. (1-3 cr per qtr; up to 8 cr may apply toward major; prereq #; S-N only)

Leadership opportunities for upper division students wishing to assist with the Biology Colloquium.

5001. BIOCHEMISTRY. (4 cr; prereq 1009, 12 cr organic chemistry or #)

Biochemistry and biophysics of cells; emphasis on enzyme catalysis, cellular energetics, biosynthesis of cellular constituents, and cellular regulatory mechanisms.

5003. GENETICS. (4 cr, §GCB 3022, §GCB 5022; prereq 5001)

Introduction to the nature of genetic information, its transmission from parents to offspring, its expression in cells and organisms, and its course in populations.

5004. CELL BIOLOGY. (3 cr; prereq 5001)

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.

5013. MICROBIOLOGY. (5 cr, §MicB 3103, §MicB 5105, §VPB 3103; prereq 5001)

Taxonomy, anatomy, physiology, biochemistry, and ecology of microbes. Emphasis on molecular structure in relation to bacterial function. Lab.

BioC 5025. LABORATORY IN BIOCHEMISTRY. (2 cr; prereq 5001 or ¶5001 or BioC 3031 with grade of B or better)

Discussions of techniques and problem-solving approaches illustrated with laboratory experiments and demonstrations.

5041. ECOLOGY. (4 cr, §5841; prereq Math 1142 or 1251, Biol 1103 or 1106 or 3011 or 3012)

Growth, structure, and evolution of populations. Pairwise biotic interactions between species and their effect on the diversity and structure of natural communities. Nutrient dynamics, function, productivity, and temporal stability of ecosystems. Lab.

5112. RHYTHMS AND CIRCADIAN REGULATION. (5 cr, §3112; prereq 15 cr biology, 10 cr chemistry or #)

For description, see 3112.

5125. RECOMBINANT DNA LABORATORY. (4 cr; prereq Δ; application necessary)

Introduction to basic recombinant DNA techniques. Emphasis on methods for growing, isolating, and purifying recombinant DNAs and cloning vectors.

5950. SPECIAL TOPICS IN BIOLOGY. (1-5 cr per qtr; prereq Δ)

5951. SOCIAL USES OF BIOLOGY. (4 cr; prereq 10 cr sciences; S-N only)

Influence of biological science on the quality of human life; agriculture, medicine, occupational health, environmental science, and theories of human nature. Responsibilities and roles of biologists in policy formulation in the scientific and political world.

Courses Offered at Lake Itasca Forestry and Biological Station

See the *Summer Session Bulletin* for course descriptions.

3812. PLANT BIOLOGY. (5 cr, §1103, §3012; prereq 1009, Chem 1052)

Plant diversity and evolution; structure and function of plant cell and of whole organism; growth and development of plants. Field trips.

5810. TOPICS IN ENVIRONMENTAL EDUCATION FOR ELEMENTARY TEACHERS. (5 cr; prereq Δ)

Intensive two-week environmental education institute for elementary teachers in ecology and environmental concerns. Emphases on integrating concepts into elementary school curriculum.

5816. FIELD BIOLOGY PHOTOGRAPHY. (3 cr; prereq course in beginning biology, Δ; limited to 20 students; A-F only)

Field photography techniques for documentation of insects, vertebrates, aquatic organisms, and habitats of the Itasca area. Emphasis on general photographic principles and applied advanced techniques using flash, reversed lenses, infrared photoelectric tripping devices. On-site processing of color slides and black-and-white films. No previous processing experience needed.

5841. ECOLOGY. (5 cr, §5041; prereq 1103 or 1106 or 3011 or 3012, Math 1142 or 1251, Δ)

Growth, structure, and evolution of populations. Pairwise biotic interactions between species and their effect on the diversity and structure of natural communities. Nutrient dynamics, function, productivity, and temporal stability of ecosystems. Field work at Itasca station.

5850. SPECIAL TOPICS IN BIOLOGY. (1-10 cr per qtr; prereq Δ)

5870. ITASCA SEMINAR. (1 cr; prereq Δ)

Topic selected and scheduled during registration.

5890. RESEARCH PROBLEMS AT ITASCA IN ECOLOGY AND BEHAVIORAL BIOLOGY; OR ENTOMOLOGY, FISHERIES, AND WILDLIFE; OR PLANT PATHOLOGY; OR SOIL SCIENCE; OR ZOOLOGY. (Cr ar; prereq #, Δ)

Biostatistics (PubH)

School of Public Health

Staff—Head, Thomas A. Louis, A460 Mayo Memorial Building; *Director of Undergraduate Studies,* Anne I. Goldman, A430 Mayo Memorial Building

Professors: Boen, Goldman, Kjelsberg, Le, Louis

Major Requirements and Course Descriptions

Associate Professors: Bartsch, Connett, Neaton, Zelterman

Assistant Professors: Carlin, Grambsch, Thomas

Biostatisticians develop and apply statistical methods to the design, conduct, and analysis of health studies ranging from laboratory and clinical to population-based contexts. Effective collaborations depend on an understanding of the subject area and communication with other scientists.

Biostatisticians are in high demand in academic, industrial, and all levels of governmental organizations, including schools of public health, pharmaceutical companies, and the National Institutes of Health. A career as a professional biostatistician normally requires graduate study, available at Minnesota and many other universities, but there are job opportunities for B.A. graduates.

B.A. Major Sequence

Required Preparatory Courses—Biol 1009; Chem 1051-1052; Math 1251-1252-1261

Major Requirements—5420, 5450, 5452, 5454; Math 3251 or 3252; CSci 3101 or 3102; at least 10 cr chosen from PubH 5459, 5460, 5461, 5462, Stat 5121-5122, 5301, 5302

Other selections are possible with the approval of the director of undergraduate studies.

3400. DIRECTED STUDIES. (Cr ar [may be repeated for cr]; prereq #)
Guided individual reading or study.

5415w. BIostatistical METHODS II. (3 cr, §5452; prereq 5404 with grade of B or better or 5409 or 5450 or #) Jeffries
Continuation of basic statistical methods including correlation, regression, analysis of variance and nonparametric tests. Introduction to using computer packages for data analysis.

5420f. STATISTICAL COMPUTING I: USING STATISTICAL PACKAGES. (3 cr; prereq ¶5450 or #) Jeffries

Using the statistical computer package SAS (also some SPSSX) for analyzing biomedical data. File management, data manipulation, and basic statistical analyses.

5421w. STATISTICAL COMPUTING II: FORTRAN AND ADVANCED SAS. (3 cr; prereq 5420, ¶5452, multivariable calculus, linear algebra or #) Goldman
FORTRAN and advanced SAS for statistical computation, generation of data for Monte Carlo studies, and display of statistical graphs. Matrix algebra, calculus, some statistics, and basic experience with SAS assumed. No FORTRAN expected.

5422s. STATISTICAL COMPUTING III: DATA COLLECTION AND MANAGEMENT. (3 cr; prereq 5420, 5421, 5462 or #) Neaton

Methods of data collection, forms design, and data entry methods for clinical trials and epidemiological studies. Data editing methods, database design, and statistical report generation using NOMAD and SAS.

5450f,s,ssI. BIostatistics I. (4 cr, §5414; prereq Math 1111 or Math 1201 or #) Staff
Descriptive statistics; Gaussian probability models, point and interval estimation for means and proportions, hypothesis testing (including t-tests and chi-square tests); regression and correlation techniques; one-way analysis of variance; applications in the health sciences using output from statistical packages.

5452w. BIostatistics II. (4 cr; prereq 5450, familiarity with basic concepts of calculus, knowledge of SAS) Zelterman

Inference for Poisson data; chi-square tests for frequency data; probability; small sample binomial tests; linear regression; analysis of variance; logistic regression; introductory survival analysis; nonparametric tests; using SAS in data analysis.

5454s. BIostatistics III. (4 cr; prereq 5452, familiarity with basic concepts of calculus, knowledge of SAS) Grambsch

Multiple regression techniques for biological and health science data; estimation, testing, and prediction; underlying assumptions; model selection; applications to bioassays, among others; using statistical packages for analysis.

5459Hs. INTRODUCTION TO THE MATHEMATICAL FOUNDATION OF BIostatistics. (3 cr; prereq PubH 5452, 2 qtrs calculus or #) Carlin
Probability models. Large-sample maximum likelihood theory: the maximum likelihood ratio and score statistics; illustrations from epidemiology, clinical trials, and other biomedical and health sciences areas.

5460f. DEMOGRAPHIC METHODS IN PUBLIC HEALTH. (3 cr, §Soc 5561; prereq biostatistics or epidemiology major or #) Grimm, Kjelsberg
Demographic measures of mortality, natality, and morbidity. Rate standardization methods. Sources of demographic and epidemiologic data from censuses, health surveys, disease registries, and the vital registration system. Analysis of mortality trends and methods of follow-up, population projection, current life tables.

5461. BIostatistical TOPICS IN EPIDEMIOLOGY. (3 cr; prereq 5452) Connett

Design and analysis of case-control studies, including topics on misclassification, confounding factors, Mantel-Haenszel procedure, matching designs and sample size estimation. Cohort analysis in epidemiology including topics on Poisson regression models for use with person-years of observation.

5462w. CLINICAL TRIALS I. (3 cr; prereq 5452, biostatistics or epidemiology major or #) Neaton
Introduction to and methodology of randomized clinical trials; design issues, case examples, operational aspects, elementary statistical methods, and application to follow-up studies in medicine and public health.

Broadcasting

Students interested in broadcasting may wish to pursue a major in either Speech-Communication or in Journalism.

Cell Biology

See Genetics and Cell Biology.

Chemistry (Chem)

Institute of Technology

Staff—Chair, W. Ronald Gentry, 139 Smith Hall; **Academic Vice Chair,** Wilmer G. Miller

Professors: Almlöf, Barany, Barbara, Britton, Carr, Dahler, Davis, Ellis, Etter, Evans, Gassman, Gentry, Gladfelter, Gray, Hoye, Kariv-Miller, Kreevoy, Lipsky, Mann, Mead, L. Miller, W. Miller, Moscowitz, Noland, Pignolet, Que, Swofford, Truhlar

Associate Professors: Hoye, Kass, K. Leopold, Liu, Lodge, Stankovich

Assistant Professors: D. Leopold, Roberts, Rychnovsky, Tolman

Adjunct Faculty—Associate Professors: Heilman, Krepski, Rasmussen

Chemistry probes the fundamental concepts of nature and helps us understand the world around us. Chemistry deals with matter—what substances are made of, their properties, and how they are transformed into new substances. Chemistry is central to research in areas such as super conductivity, biotechnology, high tech polymers, drugs, energy,

pollution, and new materials for electronics and catalysis.

The chemistry curriculum, which includes courses in chemistry, physics, mathematics, English, and a foreign language, covers the background necessary for a successful career in this field.

A special course program is recommended for pre-med chemistry majors. This program includes a number substitutions, the appropriate biology and biochemistry courses, and a reduction in some of the normally required chemistry courses. It is also possible to obtain degrees in both chemistry and chemical engineering in the same time normally required for one of the degrees. This double major requires careful course planning and should be discussed as early as possible with a chemistry adviser. All chemistry majors are advised by faculty and staff in the chemistry advising office. Students submit one-year degree program plans in consultation with an adviser.

Special Opportunities—The chemistry department offers opportunities for undergraduate research with many of its outstanding faculty. Professional activities are available through membership in the Student Affiliate Program of the American Chemical Society. In addition, the department offers a number of scholarships and awards for outstanding chemistry majors. Information on these opportunities may be obtained from the chemistry advising office.

Transfer Students—It is recommended that potential transfer students contact the advising office concerning the proposed transfer of courses before planning a curriculum. This can be done in writing, during a visit, or over the phone: Chemistry Undergraduate Advising, 135 Smith Hall, 207 Pleasant Street S.E., Minneapolis, MN 55455 (612/624-8008).

For Students Taking Beginning Courses—All course offerings are intended for students who have taken high school chemistry. Completion of at least one course in high school chemistry is a prerequisite for Chem 1001 or 1051. High school

Major Requirements and Course Descriptions

chemistry is recommended preparation for all other courses; students who lack this background will be at a disadvantage.

All students taking Chem 1001 or 1051 are required to take the chemistry placement examination. For further information, contact General Chemistry, 115 Smith Hall, 207 Pleasant Street S.E., Minneapolis, MN 55455 (612/624-0026).

Note: You must present a deposit card for admission to a laboratory section. See the *Class Schedule* for information about deposit cards.

B.A. Major Sequence

Required Preparatory Courses—1051-1052, 1133; Math 1251-1252-1261; Phys 1251-1252-1253

Major Requirements—3331, 3332, 3333, 3335, 3336, 5133, 5140, 5533, 5534, 5535, 5540, 5731, 5732, 5740

Math 3251, 3261

Major project: 2 cr min research project (Chem 5970 or 3970 or 3499)

More information, including a list of areas recommended for electives and for the major project, is available at the Undergraduate Advising Office, 135 Smith Hall.

1001. GENERAL PRINCIPLES OF CHEMISTRY.

(4 cr, §1003, §1008; for students not passing chemistry placement examination; prereq high school chemistry or equiv, 2 yrs high school mathematics required; 4 yrs recommended, high school physics recommended; 3 lect, 1 lab discussion, and one 3-hr lab per wk) Introduction to chemistry, matter and energy, atoms, molecules, chemical bonding, mole and chemical calculations, gases, liquids, solids, chemical reactions, acids, bases, and equilibrium.

1002. ELEMENTARY ORGANIC CHEMISTRY.

(4 cr, §3301, §3302; prereq 1001 or passing placement examination; primarily for nursing and forestry students; all IT students excluded without special permission; terminal course; 3 lect, 1 lab discussion, and one 3-hr lab per wk)

Short introduction to organic chemistry; emphasis on biological systems.

1003. PHYSICAL WORLD, CHEMISTRY. (5 cr, §any other college chemistry course; prereq 1 yr high school algebra; high school chemistry recommended; a terminal course—cannot be used as prereq for any other advanced chemistry course; 4 lect, 1 rec, one 2-hr lab per wk)

Fundamental concepts of chemical bonding, structure of matter, and forces in the physical world. Scientific methods and principles that contribute to understanding the environment and problems faced in improving it. Labs to illustrate.

1008. PHYSICAL WORLD, CHEMISTRY. (4 cr, §any other college chemistry courses; prereq 1 yr high school algebra; high school chemistry recommended; a terminal course—cannot be used as prereq for any other chemistry course)

Same as Chem 1003, but without lab.

1051-1052. CHEMICAL PRINCIPLES I AND II.

(4 cr per qtr; prereq 1001 or passing placement examination; primarily for students majoring in science or engineering; 3 lect, 1 lab discussion, one 3-hr lab per wk)

Atomic theory, periodic properties of elements, chemical thermodynamics, development of structural concepts, geometry of molecules, bonding theory, behavior of gaseous and liquid states, solid state and materials, chemistry, dynamics, equilibrium, behavior of solutions, acids and bases, descriptive chemistry of elements and compounds.

1051H-1052H. HONORS CHEMICAL PRINCIPLES I AND II.

(4 cr per qtr; prereq selection for IT Honors curriculum or consent of IT Honors Office, 1001 or passing placement examination; 3 lect, 1 lab discussion and one 3-hr lab per wk)

For description see 1051-1052.

1133. ELEMENTARY QUANTITATIVE ANALYSIS.

(5 cr; prereq 1052; 3 lect hrs, two 4-hr labs per wk) Introduction to the theory and practice of chemical methods of analysis for students majoring in chemistry. A series of discussions and exercises in BASIC programming are part of pre-lab presentations. No prior experience with computer programming needed.

3100. QUANTITATIVE ANALYSIS LECTURE.

(3 cr, 3100-3101†; prereq 1052; for non-chemistry majors)

Introduction to the theory of quantitative chemical analysis.

3101. QUANTITATIVE ANALYSIS LABORATORY.

(2 cr, 3100-3101†; prereq 3100 or §3100; for non-chemistry majors; 8 lab hrs per wk)

Laboratory introduction to quantitative chemical analysis.

3301. ELEMENTARY ORGANIC CHEMISTRY I.

(4 cr, §3331; prereq 1052 or equiv; for non-chemistry majors; 4 lect hrs per wk)

Important classes of organic compounds, both aliphatic and aromatic; some heterocyclic compounds.

3302. ELEMENTARY ORGANIC CHEMISTRY II.

(4 cr; prereq 3301, 3305 or ¶3305 [passing grade in 3305 required for cr in 3302]; 4 lect hrs per wk)
Continuation of Chem 3301.

3303. ELEMENTARY ORGANIC CHEMISTRY III.

(4 cr; prereq 3302, 3306 or ¶3306 [passing grade in 3306 required for cr in 3303]; 4 lect hrs per wk)
Basic principles of organic chemistry and survey of organic reaction mechanisms to coordinate knowledge acquired in 3301, 3302, 3305, and 3306.

3304. ELEMENTARY BIO-ORGANIC CHEMISTRY.

(4 cr; prereq 3302 or 3332)
Chemical reactivities and methods for the synthesis and structural characterization of biologically important classes of organic compounds such as lipids, carbohydrates, amino acids, peptides, proteins, nucleotides, nucleosides, and nucleic acids.

3305. ELEMENTARY ORGANIC CHEMISTRY

LABORATORY I. (2 cr; prereq 3301 or ¶3301; 1 lab conf, 4 lab hrs per wk)
Laboratory: techniques used in preparation of typical organic substances.

3306. ELEMENTARY ORGANIC CHEMISTRY

LABORATORY II. (2 cr; prereq 3302 or ¶3302, 3305; 1 lab conf, 4 lab hrs per wk)
Continuation of 3305.

3331. INTRODUCTORY ORGANIC CHEMISTRY

I. (5 cr, §3301; prereq 1052 or 1 yr college chemistry; for chemistry and chemical engineering majors; 5 lect hrs per wk)
Important classes of organic compounds; their constitutions, configurations, and conformations; relationship between molecular structure and chemical reactivity.

3332. INTRODUCTORY ORGANIC CHEMISTRY

II. (3 cr, 3335†; prereq 3331; 3 lect hrs per wk)
Reactions of organic compounds, nucleophilic substitution and addition; electrophilic substitution and addition; elimination reactions; molecular rearrangements; oxidation and reduction.

3333. INTRODUCTORY ORGANIC CHEMISTRY

III. (3 cr; prereq 3332; 3 lect hrs per wk)
Free radical reactions, electrocyclic reactions, photochemistry, organic synthesis, heterocyclic compounds, synthetic polymers, chemistry of natural products and life.

3335. INTRODUCTORY ORGANIC CHEMISTRY

II LABORATORY. (2 cr; prereq 3332 or ¶3332 [¶3332 recommended]; two 4-hr labs per wk)
Laboratory to accompany 3332.

3335H-3336H†. HONORS INTRODUCTORY OR-

GANIC CHEMISTRY II LABORATORY. (5 cr; prereq 3332 or ¶3332, #; chemistry, chemical engineering, biochemistry majors only)
Honors laboratory to accompany 3332.

3336. INTRODUCTORY ORGANIC CHEMISTRY

III LABORATORY. (2 cr; prereq 3333 or ¶3333 [¶3333 recommended]; two 4-hr labs per wk)

Laboratory to accompany 3333.

3970. DIRECTED STUDIES. (Cr ar; prereq #)

On- or off-campus learning experiences, individually arranged between student and chemistry faculty member, in areas not covered by regular courses.

3991, 3992, 3993. SPECIAL TOPICS IN CHEMISTRY. (Cr ar; prereq #)

Topics in chemistry, areas of current research. Primarily for 3rd- and 4th-year chemistry majors.

5122. ADVANCED ANALYTICAL CHEMISTRY.

(4 cr; prereq 1 yr organic chemistry and course in thermodynamics)
Equilibria in aqueous and nonaqueous systems.

5127. ANALOG INSTRUMENTATION. (5 cr; prereq chemistry major or grad, Phys 1253, Math 1261 or equiv or #; 4 lect, 4 lab hrs per wk)

Basic principles and applications of electronic circuitry; servo systems, operational amplifiers, feedback control, oscillators, digital gates, and converters for signal processing and control of chemical measurement systems.

5128. THE SMALL COMPUTER IN THE CHEMICAL LABORATORY. (5 cr; prereq 5127 or #; 3 lect hrs, two 4-hr labs per wk)

Applications of the laboratory computer to the control of chemical instrumentation; acquisition of data. Hardware (interfacing) and software (assembly language programming) aspects of automating the chemical experiment.

5133. CHEMICAL INSTRUMENTATION AND ANALYSIS LECTURE. (3 cr; prereq 1133, 5534, 5535, or #)

Methodology and practices for solving analytical problems. Modern instrumental techniques used in analysis.

5139. CHROMATOGRAPHY AND SEPARATION SCIENCE. (3 cr; prereq chemistry major or grad, 5133, 5134 or equiv or #)

Fundamental and practical aspects of gas liquid chromatography, modern liquid chromatography, electrophoresis, and other techniques used for analysis and separations.

5140. CHEMICAL INSTRUMENTATION AND ANALYSIS LABORATORY. (3 cr, §5134; prereq 5133, chemistry major; two 4-hr labs per wk)

Instrumental techniques including spectroscopic methods and analysis, electrochemical methods of analysis, and analyses based on separation. Emphasis on using computers in data collection and reduction.

5301. SPECTRAL METHODS FOR ORGANIC QUALITATIVE ANALYSIS. (4 cr, §8302; prereq 3303 or 3333 or equiv; 3 lect and 1 conf hrs per wk)

Nuclear magnetic resonance, mass, and ultraviolet and infrared spectral analysis as applied to solution of organic problems.

Major Requirements and Course Descriptions

5302. ORGANIC SYNTHESIS. (4 cr; prereq 3303 or 3333 or equiv, #; 8 lab and 2 conf hrs per wk)
Reactions of typical functional groups; modern laboratory methods of organic synthesis.

5342. CHEMISTRY OF NATURAL PRODUCTS. (3 cr; prereq 3303 or 3333 or equiv; offered alt yrs)
Biosynthesis of secondary natural products. Emphasis on alkaloids, terpenes, and acetogenins.

5344. HETEROCYCLIC COMPOUNDS. (3 cr; prereq 3303 or 3333 or equiv; offered when demand warrants)
Typical classes of heterocyclic compounds; their chemical and physical properties and uses. Synthesis.

5520-5521. ELEMENTARY PHYSICAL CHEMISTRY. (3 cr per qtr; prereq 1 yr college chemistry, Math 3251, Phys 1253 or 1106 or ¶Phys 1253)
General survey. 5520: Chemical thermodynamics. 5521: Kinetics, statistical mechanics, structure.

5525. PHYSICAL BIOCHEMISTRY: SOLUTION STRUCTURE AND INTERACTIONS OF BIOLOGICAL MACROMOLECULES. (4 cr, §BioC 5525, §MdBc 5525; prereq 2 qtrs physical chemistry, Biol 5001 or equiv)
Physical chemistry of equilibrium, transport, and scattering phenomena in solution, with application to proteins and nucleic acids. Intermolecular forces, macromolecular dynamics, conformational transitions, binding thermodynamics, methods for determining polymer size and shape, including sedimentation, diffusion, viscosity, electrophoresis, and scattering.

5526. PHYSICAL BIOCHEMISTRY: SPECTROSCOPIC METHODS I. (4 cr, §BioC 5526, §MdBc 5526; prereq 2 qtrs physical chemistry)
Lectures on fundamental spectroscopic principles. Emphasis on development of magnetic resonance theory used in study of biological macromolecules.

5527. PHYSICAL BIOCHEMISTRY: SPECTROSCOPIC METHODS II. (4 cr, §BioC 5527, §MdBc 5527; prereq 2 qtrs physical chemistry, BioC/MdBc/Chem 5526 or #)
Application of optical and magnetic resonance techniques to study of structure and dynamics in proteins, lipids, nucleic acids, and synthetic analogs.

5533. QUANTUM CHEMISTRY. (4 cr; prereq 1 yr college chemistry, Math 3251, Phys 1253 or ¶Phys 1253 or Phys 1106 with #)
Principles of quantum mechanics; applications to atomic and molecular structure and to spectroscopy.

5534. CHEMICAL THERMODYNAMICS. (4 cr; prereq 1T upper division or CLA chemistry major or Δ, Math 3261, Phys 1253 or ¶Phys 1253 or Phys 1106 with #)
Principles of thermodynamics; application to chemical systems.

5535. STATISTICAL MECHANICS AND REACTION KINETICS. (4 cr; prereq 5534)
Statistical thermodynamics and the kinetic theory of gases; application to reaction rate theory. Phenomenological kinetics and experimental methods. A continuation of 5534.

5540. PHYSICAL CHEMISTRY LABORATORY. (3 cr, §5536, §5538; prereq 5533, 5535 or 5533, ¶5535 or ¶5533, 5535, chemistry major; two 4-hr labs per wk)
Laboratory experiments illustrating principles and methods of thermodynamics, reaction kinetics, and quantum mechanics.

5610. POLYMER SCIENCE. (4 cr, §MatS 5610; prereq physical chemistry or MatS 5011 or #; 3 lect and 3 lab hrs per wk)
Polymer synthesis and physical chemistry: polymerization kinetics and reactors, molecular weight distribution, network formation, macromolecules in solution and their characterization, the glassy and crystalline state, rubber elasticity, flow and viscoelasticity, environmental degradation.

5731. MAIN GROUP INORGANIC CHEMISTRY. (3 cr; prereq 5533 or 5534 or ¶5533 or ¶5534, chemistry or chemical engineering major)
Structure and bonding concepts in compounds where s and p electrons are important. Descriptive main group inorganic chemistry; symmetry concepts applied to inorganic molecules.

5732. TRANSITION METAL INORGANIC CHEMISTRY. (3 cr; prereq 5533 or 5534 or ¶5533 or ¶5534, chemistry or chemical engineering major)
Emphasis on transition metal compounds where d electrons are important. Topics of current interest such as organometallic, bioinorganic, and metal cluster chemistry.

5740. INORGANIC CHEMISTRY LABORATORY. (3 cr, §5734, §5735; prereq 5731, 5732 or 5731, ¶5732 or ¶5732 or ¶5731, 5732, chemistry major; two 4-hr labs per wk)
Laboratory experiments in inorganic and organometallic chemistry illustrating synthetic and spectroscopic techniques.

5751. PHYSICAL INORGANIC CHEMISTRY I. (4 cr; prereq 5732 or equiv or #)
Physical methods and concepts applied to inorganic and organometallic systems including NMR, IR, UV-VIS, ESR, Mössbauer and mass spectroscopy, magnetic measurements, X-ray crystallography.

5752. PHYSICAL INORGANIC CHEMISTRY II. (4 cr; prereq 5751 or equiv or #)
Solution thermodynamics and kinetics applied to inorganic and organometallic systems, determination of reaction mechanisms; symmetry and ligand field concepts.

5756. X-RAY CRYSTALLOGRAPHY. (4 cr; prereq grad or #; offered alt yrs)

The determination of crystal structures by X-ray diffraction of single crystals. Data collection, structure, solving, and refinement of structures of inorganic and organic molecules of 100 atoms or less.

5761. ORGANOMETALLIC CHEMISTRY. (4 cr; prereq 5732 or equiv or #)

Syntheses, reactions, structures, and other important properties of main group and transition metal organometallic compounds; treatment in terms of modern electronic and structural theory; emphasis on their use as stoichiometric and homogeneous catalytic reagents in organic and inorganic systems.

5762. SURVEY OF THE CHEMISTRY OF THE TRANSITION METALS. (4 cr; prereq 5732 or equiv or #)

Reactions and properties of the transition metals and their compounds. Modern coordination chemistry including magnetic and spectroscopic properties and qualitative ligand field theory.

5765. BIOINORGANIC CHEMISTRY. (4 cr; prereq 5732 or equiv, chemistry majors or #)

Role of metal ions in biology with an emphasis on the structure, function, and spectroscopy of metalloproteins and their synthetic analysis.

5803. THE CHEMISTRY OF INDUSTRY. (4 cr; prereq chemistry sr or grad or #)

Basic industrial and polymer chemistry and the technology on which industry is based. Relationship of basic properties to industrial utility. Economics, social problems, and the industrial environment.

5970. DIRECTED STUDY. (Cr ar; prereq any 5xxx chem course, #)

On or off campus learning experiences, individually arranged between student and chemistry faculty member, in areas not covered by regular courses.

5991, 5992, 5993. SELECTED TOPICS IN CHEMISTRY. (Cr ar; prereq sr, Δ)

Topics of current interest. Consult department for details for a particular quarter.

Chicano Studies (Chic)

Staff—Chair, Guillermo Rojas, 102 Scott Hall

Associate Professor: Valdés

Assistant Professor: Montaña

The department offers an interdisciplinary program leading to a major and minor in Chicano Studies. Courses are for students interested in the social, historical, and cultural experience of the Mexican population in the United States. The core courses intro-

duce the student to the historical and literary methodologies while exploring the germinal texts that portray the history of the Southwest from 1598 to the present. The Chicano Studies program allows for flexibility in pursuing related work in Latin American Studies, Women's Studies, and Spanish. Students are encouraged to develop interests in other disciplines in order to seek double majors.

Study Abroad—Study in a Spanish-speaking country can help improve language skills and deepen understanding of Hispanic culture in the United States. The Chicano Studies department actively encourages students to include a study abroad experience as an integral part of their undergraduate program. Appropriate credits can be applied toward the major or minor. A number of relevant programs are available in Mexico, Central America, and the Spanish-speaking Caribbean. See Foreign Study.

B.A. Major Sequence

Spanish Language Proficiency—Span 1101, 1102, 1103 or proficiency oral exam required (documented 3 years of high school Spanish) or departmental translation exam.

Major Requirements—48 cr from the following 3105, 3106, 3107, 3212, 3213, 3330, 3375, 3427, 3428, 3441, 3442, 3507, 3508, 3712, 3970, 5920. These must include at least 8 credits from 3105, 3106, 3107. May include up to 8 credits of electives from other departments, with adviser approval.

Major project: 5901 (4 credits) and Senior Research Project in 5970 (3 cr min)

Minor Sequence

Required Preparatory Courses—Minimum of two courses from the following: Chic 3105, 3106, 3107

Major Requirements and Course Descriptions

Minor Requirements—16 cr in 3xxx or 5xxx courses selected with approval of adviser

3105f. INTRODUCTION TO CHICANO STUDIES: THE BEGINNINGS. (4 cr)

Convergence of Europe and America in Mesoamerica and the formation of Mexican society. Literary, social, cultural, and historical perspectives. Columbian period to 1821.

3106f. INTRODUCTION TO CHICANO STUDIES: MEXICO AND THE UNITED STATES. (4 cr)

Convergence of Spanish-Mexican and Anglo-American societies in the Spanish borderlands. Literary, social, cultural, and historical perspectives, 1821 to 1960.

3107w. INTRODUCTION TO CHICANO STUDIES: THE CHICANO IN CONTEMPORARY SOCIETY. (4 cr)

The formation of contemporary Chicano political, economic, and cultural consciousness, and the forms in which it has been expressed, 1960 to the present.

3212s. LA CHICANA. (4 cr)

Women of la raza, their impact on literature, history, society, politics, and culture.

3213. CHICANO MUSIC AND ART. (4 cr)

The musical and artistic experiences of Chicanos.

3375. FOLKLORE OF GREATER MEXICO. (4 cr)
Montaño

Survey of scholarly materials on Hispanic folk religion, arts, crafts, foodways, and oral literature.

3427. HISTORY OF CUBA AND PUERTO RICO. (4 cr, §Hist 3427) Valdés

Historical development of Cuba and Puerto Rico from Spanish conquest to present. Conquest and colonization, slavery, Hispanic Caribbean society and culture, Operation Bootstrap, Cuban Revolution.

3428. HISTORY OF RELATIONS BETWEEN UNITED STATES AND MEXICO, 1821 TO PRESENT. (4 cr, §Hist 3428) Valdés

U.S.-Mexico relations in the 19th and 20th centuries.

3441. CHICANO HISTORY TO 1900. (4 cr, §Hist 3441) Valdés

History of Chicanos to 1900. The Spanish conquest and colonization of the borderlands. Mexican society in the early 19th century, the Mexican-American War and aftermath.

3442. CHICANO HISTORY, 1900 TO PRESENT. (4 cr, §Hist 3442) Valdés

Migration, repatriation, the Bracero program, contemporary Chicano politics, work, society, and culture.

3507. INTRODUCTION TO CHICANO LITERATURE. (4 cr) Rojas

History, background, readings in all genres of Chicano literature.

3508. INTRODUCTION TO CHICANO LITERATURE: TEXT AND CONTEXT. (4 cr) Rojas

Major literary works by Chicano writers in their social and historical context.

3712. CHICANOS: PSYCHOLOGICAL PERSPECTIVES. (4 cr)

Psychological studies of Chicanos.

3970f, w, s, su. DIRECTED STUDIES. (Cr ar; prereq #)

Guided individual reading or study.

5920. TOPICS IN CHICANO STUDIES. (4 cr; prereq grad or sr, #)

Multidisciplinary themes in Chicano Studies.

5970. DIRECTED STUDIES. (Cr ar; prereq #)

Guided individual reading or study.

Child Psychology (CPsy)

Institute of Child Development

Staff—*Director*, Richard A. Weinberg, 180 Child Development; *Director of Undergraduate Studies*, William R. Charlesworth, 186 Child Development; *Director of Graduate Studies*, Herbert L. Pick, 206b Child Development; *Departmental Honors Adviser*, Anne D. Pick, 170 Child Development

Professors: Charlesworth, Collins, Egeland, Gunnar, Hartup, Maratsos, A. Pick, H. Pick, Sroufe (on leave 1992-93), Weinberg, Yonas

Associate Professors: Masten, Nelson

Assistant Professors: Bauer, Sera

Lecturers: Galle, Mooney-McLoone, Murphy

Adjunct Faculty—Brookins (Social Work), Garmezy (Psychology), Grotevant (Family Social Science), Leon (Psychology), Shapiro (Neurology), Turnure (Educational Psychology), Van den Broek (Educational Psychology), Williams (Public Health)

Child psychology deals with behavioral development and maintenance from the prenatal period to maturity in the spheres of cognition, ethology, genetics, language, learning, perception, and social behavior.

The Institute of Child Development is housed in the College of Education. However, the child psychology B.A., B.S., and minor are College of Liberal Arts degrees

and all undergraduate child psychology courses are considered CLA courses; they count toward the CLA graduation requirement. Detailed information regarding the majors in child psychology, independent or directed study courses, and other current course offerings is available from the undergraduate advisory committee, 106 Child Development, or in 104 Child Development. Honors contract registration is available for all courses offered by the department with the exception of those offered for S-N credit only. Qualified students should consult the Honors Office, 115 Johnston Hall.

For information about the specialized curriculum in nursery school and kindergarten education, see the *College of Education Bulletin*. If you are interested in studies leading to licensure for nursery school education, consult the adviser for the licensure program, 134c Child Development.

General Courses—1301, 3303 or 5303, 3309, 5301, 5302, 5304, 5332 deal with general education subject matter that is of ten of interest to students in other concentrations.

B.A. Major Sequence

Required Preparatory Courses—1301; Psy 1001

Major Requirements—3308 or Psy 1004, 1005; Psy 3801 or equiv; 3331 or 5331, 3343, 5329

One course from 5332 or 5336; one course from 5341, 5343 or 5345; one course from 5311, 5315 or 5319

Senior project: 3960

Minimum of 12 additional cr in any 3xxx and 5xxx child psychology courses, which may include the following: 3330, 3980, 5970, 5990 (only 4 cr of each course may be counted toward the major)

Psychology cr may not be counted toward the 30 3xxx-5xxx cr outside the major. (Double psychology-child psychology majors are not permitted.)

B.S. Major Sequence

Required Preparatory Courses—1301; Psy 1001

Major Requirements—12-17 cr to include 3308, Psy 3801 or equiv, Soc 5821 or EPsy 5240, Soc 3811 or EPsy 5281

12 cr from 3331 or 5331, 3343, 5329

8 cr from 3330 or 5330, 5334

4 cr from 5341, 5343, 5345

4 cr from 5332, 5336

8 cr from 5311, 5315, 5319

4 cr from senior project: 3960

12 cr from 3xxx or 5xxx CPsy courses, which may include 3980, 5970, 5990 (only 4 cr of each course may be counted toward the major)

22-24 cr from supporting field courses (list available from department)

Minor Sequence

Required Preparatory Courses—1301; Psy 1001

Minor Requirements—3308 or Psy 1004 and Psy 1005

One course from 3331 or 5331, 3343, 5329

8 cr from 5302, 5303, 5304, 5311, 5315, 5319, 5322, 5332, 5334, 5336, 5341, 5343, 5345, 5349

Minimum of 4 additional cr in any 3xxx or 5xxx child psychology course

1301f, w,s,su. INTRODUCTORY CHILD PSYCHOLOGY. (4 cr, §3309, §5301; prereq 5 cr introductory psychology)

The science of child behavior; review of theories and research.

1970f, w,s,su. DIRECTED STUDY IN CHILD PSYCHOLOGY. (Cr ar; prereq #)

Readings in child psychology.

3303f, w,s,su. ADOLESCENT PSYCHOLOGY. (4 cr, §5303; prereq 5 cr introductory psychology)

Physical, cognitive, and social development during adolescence.

3308f, w,s. RESEARCH METHODS IN CHILD PSYCHOLOGY. (4 cr; prereq 1301, Psy 1004)

Techniques used in the study of child development; emphasis on collection, organization, and analysis of data.

Major Requirements and Course Descriptions

3309f,w,s,su. INTRODUCTORY CHILD PSYCHOLOGY FOR THE SOCIAL SCIENCES. (4 cr, §1301, §5301; prereq Psy 1001)

The science of child behavior; review of theory and research. Designed for majors in psychology, sociology, and related disciplines; not suggested for child psychology majors.

3313f,su. PSYCHOLOGY OF ATYPICAL CHILDREN. (4 cr, §5313; prereq 1301 or equiv)

Research, assessment, and behavior associated with atypicality; evaluation of research in areas of major concern for sensory, language, intellectual, and physical deviation.

3330w,s. DIRECTED EXPERIENCES. (1-4 cr per qtr, §5330; prereq 1301 or equiv, Psy 1004)

Intellectual and/or social development of children, adolescents, or adults as individuals or members of families or peer groups. Options include work with a specific age group or training in research methods, including experimental and observational techniques.

3331f,w,s,su. INTRODUCTION TO SOCIAL DEVELOPMENT. (4 cr, §5331; prereq 1301 or equiv)

Development of social relations and personality; research, methodology, and contrasting theoretical perspectives. Findings on interpersonal relationships, the concept of self, prosocial and antisocial behavior, and acquisition of social roles.

3343. INTRODUCTION TO COGNITIVE DEVELOPMENT. (4 cr; prereq 1301, 3308 or Psy 1005)

Development of cognitive processes: research, methodology, and contrasting theoretical perspectives. Introduction to research and theory in developmental psychology necessary to understand course material.

3360H. HONORS SEMINAR: CURRENT RESEARCH IN DEVELOPMENTAL PSYCHOLOGY. (2 cr; prereq 1301 or equiv; primarily for child psychology majors; S-N only)

Introduction to ongoing research programs, preparation for independent research (thesis research if honors major), discussion of career opportunities, other topics. Required for honors majors. Normally taken in junior year.

3960f,w. SENIOR PROJECT IN CHILD PSYCHOLOGY. (1-4 cr [4 cr max]; prereq 1301, sr status, #; A-F only)

Review of the literature in a current topic area of child psychology.

3980f,w,s,su. DIRECTED INSTRUCTION. (1-4 cr per qtr [4 cr max]; S-N only)

Undergraduates serve as teaching assistants in courses they have completed for credit.

5301. ADVANCED CHILD DEVELOPMENT. (4 cr, §1301, §3309; prereq 5 cr introductory psychology; primarily for nonmajors)

Theory and research in child development with emphasis on perception, language, learning, cognition, personality, and social development.

5302w,s. INFANCY. (4 cr; prereq 1301 or #)

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.

5303f,w,s,su. ADOLESCENT PSYCHOLOGY. (4 cr, §3303; prereq 5 cr introductory psychology)

For description, see 3303.

5304s. INTRODUCTION TO MATURITY AND AGING. (4 cr; prereq 1301 or equiv)

Empirical and theoretical issues in developmental psychology of maturity and aging; perceptual-motor, cognitive, and social-psychological changes from young adulthood to old age.

5305f. MULTIDISCIPLINARY PERSPECTIVES ON AGING. (4 cr, §Educ 5440, §HSU 5009, §PA 5414, §SAHP 5009, §SW 5024, §Soc 5960)

Multidisciplinary introduction to aging and the aging process.

5310. TOPICS IN CHILD PSYCHOLOGY. (1-4 cr per qtr; prereq 1301)

Selected topics in the general content area.

5311f,s,su. INTRODUCTION TO DEVELOPMENTAL PSYCHOPATHOLOGY. (4 cr, §3311; prereq 1301 or equiv, 3308 or Psy 1005)

Theories and research strategies to investigate origins and course of disordered behavior in children and adults, including description, etiology, development, excluding problems of physical, sensory, or mental handicaps.

5313f,su. PSYCHOLOGY OF ATYPICAL CHILDREN. (4 cr, §3313; prereq 1301 or equiv)

For description, see 3313.

5315w. INTRODUCTION TO MENTAL RETARDATION. (4 cr, §EPsy 5620; prereq 1301 or equiv)

Psychological and educational problems related to the mentally retarded.

5319w. INTRODUCTION TO CLINICAL CHILD PSYCHOLOGY. (4 cr; prereq 12 cr in psychology or educational psychology or sociology or child psychology)

Assessment and intervention procedures of clinical child psychology in clinical and community settings. Primarily for students not majoring in clinical psychology.

5322w. MOTOR DEVELOPMENT. (3 cr, §Kin 5131, §Kin 5132; prereq Kin 3132 or #)

Development aspects of motor skill acquisition from birth to physical maturity.

5329. GENETICS, ETHOLOGY, AND DEVELOPMENT. (4 cr; prereq 1301 or equiv)

Evolutionary theory and behavioral genetics applied to understanding of development of human behavior; formation of species-typical adaptive behavior and individual differences in infancy, childhood, adolescence.

5330w. DIRECTED EXPERIENCES. (1-4 cr per qtr, §3330; prereq 1301 or equiv, Psy 1004; A-F only)

Intellectual and/or social development of children as individuals or members of peer groups. Experiences offered in case study, social behavior, cognitive stimulation of children.

5331f,w,s,su. PROCESSES OF SOCIAL DEVELOPMENT. (4 cr, §3331; prereq 1301 or equiv)

Processes of individual change from infancy through adolescence and development of capacities for and influence of social relations: research, methodology, and theoretical perspectives.

5332. CROSS-CULTURAL CHILD DEVELOPMENT. (4 cr; prereq 4 cr child psychology)

Interdisciplinary, cross-cultural survey of theories and research on similarities and differences in cognitive, perceptual, socioemotional, and personality development; emphasis on child-caretaker relations and Asian and Hispanic cultures.

5334. CHILDREN AND YOUTH IN SOCIETY. (4 cr; prereq 4 cr child psychology)

Child development principles relative to social policy decision making; issues in applying theories, findings to problems (e.g., media influences, mainstreaming, day care, child abuse, effects of peers).

5336f,s. DEVELOPMENT AND INTERPERSONAL RELATIONS. (4 cr, §5339; prereq 1301 or equiv, 3308 or Psy 1005, 3331 or 5331)

Processes and functions of interactions with parents and peers; analysis of theory and research on developmental changes and influences.

5341. PERCEPTUAL DEVELOPMENT. (4 cr; prereq 1301, 3308 or Psy 1005 or #)

Perceptual learning and the development of sensory and perceptual processes.

5343. COGNITIVE DEVELOPMENT. (4 cr; prereq 3343, 3308 or Psy 1005 or #)

Cognitive processes; relevant theory, research literature, and methodology.

5345. LANGUAGE DEVELOPMENT. (4 cr; prereq 1301, 3308 or Psy 1005 or #)

Structure and function of language; factors influencing development; methodological problems, language scales, theories.

5349. CHILDREN'S LEARNING AND INTELLECTUAL SKILLS. (4 cr; prereq 1301, 3343 or #; not open to grads; offered alt yrs)

Current research on learning, problem solving, intellectual performance in children; practical applications.

5970f,w,s,su. DIRECTED STUDY IN CHILD PSYCHOLOGY. (Cr ar; prereq #)

Independent reading.

5990f,w,s,su. DIRECTED RESEARCH IN CHILD PSYCHOLOGY. (Cr ar; prereq #)

Individual empirical investigation.

Chinese

See Institute of Languages and Literatures.

Classical Civilization (CICv)

Staff—Chair, Thomas Clayton, 300 Folwell Hall

Faculty—Akehurst (French and Italian), Aris (Regents' Professor, Chemical Engineering and Materials Science), C. Asher (Art History), Belfiore (Classical and Near Eastern Studies), Clayton (English, and Classical and Near Eastern Studies), Cooper (Classical and Near Eastern Studies, and Art History), Jones (Regents' Professor Emeritus, History), Kelly (History), Liberman (German), McDonald (Regents' Professor Emeritus, Ancient Studies, and Classical and Near Eastern Studies), Peterson (Philosophy), Sonkowsky (Classical and Near Eastern Studies), Stuewer (History of Science and Technology), Tracy (History), Wilson (History of Medicine)

This undergraduate interdisciplinary program encompasses the study of Greek and Roman cultures and their influence on Western civilization. Its primary goal is to investigate classical civilization and its heritage from several perspectives as well as the methods and aims of several disciplines.

Details about the program as well as a list of approved courses and information about special independent study and other learning opportunities are described in the *Undergraduate Student Handbook*, available in the Classical Civilization Office, 300 Folwell Hall. Proseminars and other courses are offered regularly.

Study Abroad—Relevant field experience in the Mediterranean region can greatly enhance an undergraduate program in classical civilization, as can study in foreign universities with strong curricula in this field. Ap-

Major Requirements and Course Descriptions

appropriate credits from study abroad can be applied toward the major or minor. See also Clas 5120.

B.A. Major Sequence

Required Preparatory Courses—CLA language requirement in Greek or Latin

Major Requirements—80 cr in approved courses selected from four designated areas (at least 16 cr in language and literature; 16 in art history, archaeology, and history; 12 in thought and religion; 12 in classical traditions); at least 60 of these cr must be in 3xxx-5xxx-level courses and courses from at least three departments must be represented in each program. A senior project as well as a minimum of 8 cr in classical civilization courses also are required.

Minor Sequence

Required Preparatory Courses—At least 15 credits in Greek or Latin, and (in lieu of additional credits in the language) 12 credits in courses concerned with the culture of the country or countries where the chosen language was used.

Minor Requirements—15-25 cr in approved courses at the 3xxx-5xxx level (one course from each of the four designated areas required for the major) selected with guidance by faculty adviser.

3201. THE OLYMPIC GAMES. (4 cr, §Clas 1201, §Clas 3201) Cooper
Surveys the Olympic Games (776 B.C. to A.D. 338) and compares them with other ancient and modern athletic festivals. Slides illustrate sites and athletic events. Victors and their trophies discussed.

3340. PRACTICUM IN ARCHAEOLOGICAL FIELD TECHNIQUES. (4 cr, §Clas 3340, §Clas 5340) Cooper
Introduction to methods used for excavation on classical sites. Meets at a selected site in Minnesota for day-long sessions for one half quarter. Format arranged according to actual procedures in the field.

3510. GREAT BOOKS. (4 cr; prereq jr or sr or #)
Clayton, staff
Intensive study of major works of classical antiquity and after (written in or translated into English), related by kind, theme, style, or perspective, sometimes including works from non-Western cultures.

3711. CLASSICS OF LITERARY CRITICISM. (4 cr, §Engl 3711) Clayton
Principles of criticism as expressed and employed in major works by such writers as Plato, Aristotle, Horace, Longinus, Sir Philip Sidney, John Dryden, Samuel Johnson, David Hume, Samuel Taylor Coleridge, and T.S. Eliot.

3940. PROSEMINAR: CLASSICAL TRADITIONS IN WESTERN CULTURE. (4 cr; prereq #) Clayton, staff
The nature of Greco-Roman classical traditions manifested in various cultural spheres: language and literature, fine arts, history, science, philosophy, theology, and other disciplines; the political, social, educational, and religious life of society.

3950. TOPICS IN CLASSICAL CIVILIZATION. (1-5 cr per qtr)
Topics specified in the *Class Schedule*.

3970. DIRECTED STUDIES. (1-15 cr per qtr; prereq #)
Guided individual reading and study.

3980. DIRECTED STUDIES. (1-15 cr per qtr; prereq #)
Guided individual reading and study.

3990. DIRECTED RESEARCH. (1-15 cr per qtr; prereq #)
Guided individual research projects.

5950. TOPICS IN CLASSICAL CIVILIZATION. (1-5 cr per qtr)
Meets with 3950. Topics specified in the *Class Schedule*.

Classical and Near Eastern Studies

Staff—*Chair*, George A. Sheets, 331 Folwell Hall; *Director of Undergraduate Studies*, Gerald Erickson; *Director of Graduate Studies*, Robert Sonkowsky

Regents' Professor Emeritus: McDonald

Regents' Professor: Aris

Professors: Clayton, Cooper, Erickson, Her-sbell, Kelly, Keuls, McNally, Sonkowsky, Stavrou, Zahavy

Associate Professors: Belfiore, Krevans, Malandra, Paradise, Peterson, Reisman, Sellew, Sheets

Assistant Professors: Alchermes, Nicholson

The Department of Classical and Near Eastern Studies offers courses in the languages and literatures of Greece, Rome, and the near East (including Indo-Iranian, Modern

Greek, and Modern Hebrew); the archaeology and art history of these same civilizations and their prehistoric antecedents; and the interconnected traditions of the Latin west, the Greek east, and the Jewish experience, down to the present.

Many sophomores can qualify to enroll in 3xxx courses. Students with four years of high school Latin, three years of high school Greek, or advanced placement may begin 3xxx courses as entering freshmen. All courses are open to nonmajors.

Courses with the "Clas" designation do not require knowledge of a foreign language.

Major programs are offered in Greek, Latin, Ancient Near Eastern Studies, and Hebrew. A Latin major also is available through the College of Education. In addition, the department contributes to the interdepartmental majors of Classical Civilization (see separate bulletin listing) and Jewish Studies (see separate bulletin listing). Minor programs are offered in Greek, Latin, and Classical Civilization.

Study Abroad—Study in Europe or Israel may provide valuable enrichment for students with majors in the department. For information on options and procedures, see Foreign Study.

B.A. Major Sequence—Greek

Required Preparatory Courses—1104 or 1122 or 3052 or equiv and Δ; one course selected from Clas 1001-1003, 1023/3023, 1024/3024, 1025/3025 or Δ

Major Requirements—25 cr in Greek courses above 3052, of which at least 15 cr must be at the 34xx level or higher

15 cr in Clas 3xxx-5xxx courses (except Clas 3046) and/or in Grk courses numbered above 3052

Major project: 3951

Minor Sequence—Greek

Required Preparatory Courses—See major sequence preparatory courses above

Minor Requirements—10 cr in Greek courses above 3052, of which at least 5 cr must be at the 34xx level or higher

5 cr in Clas 3xxx-5xxx courses and/or in Grk courses numbered above 3052

B.A. Major Sequence—Latin

Required Preparatory Courses—1104 or 1122 or 3052 or four yrs high school Latin or equiv (students with three yrs high school Latin should enter 1104; with four yrs or advanced placement, any 3xxx course above 3052); one course selected from Clas 1004-1006 or 1023/3023—1025/3025 or Δ

Major Requirements—25 cr in Latin courses above 3052, of which at least 15 cr must be at the 34xx level or higher

15 cr in Clas 3xxx-5xxx courses (except Clas 3046) and/or in Latin courses numbered above 3052

Major project: 3951

Minor Sequence—Latin

Required Preparatory Courses—See major sequence preparatory courses above

Minor Requirements—10 cr in Latin courses above 3052, of which at least 5 cr must be at the 34xx level or higher

5 cr in Latin courses above 3052 or in 3xxx-5xxx classics courses

No more than one Lat 31xx course may be applied toward the minor. Clas 3046 may not be applied toward the minor.

B.A. Major Sequence—Ancient Near Eastern Studies

Major Requirements—Hebr or Arab 1101-1102-1103, 3011-3012-3013; Hist 3051-3052-3053

31 additional cr in courses at 3xxx level or above in art and archaeology, history, and language and literature, chosen with adviser approval

B.A. Major Sequence—Hebrew

Major Requirements—Hebr 3015-3016-3017

Two qtrs of biblical studies, two qtrs of rabbinics, two qtrs of modern literature, one course at 3xxx level or above using materials in translation

Major Requirements and Course Descriptions

Greek (Grk)

1020. INDIVIDUALIZED INTRODUCTION TO BIBLICAL GREEK. (2-10 cr [15 cr max], §1101-1102, §1103; prereq #)

Flexible approach to basic phonology, morphology, and syntax of Biblical (Koine) Greek at a pace established by the student. Course material presented through a combination of computer-assisted instruction, class meetings, and tutorials.

1101-1102. BEGINNING CLASSICAL GREEK. (5 cr per qtr, §3051-3052; prereq 1101 or equiv for 1102)

1103. SELECTIONS FROM GREEK LITERATURE. (5 cr, §3051-3052; prereq 1102 or equiv)
Prose and poetry.

1104. GREEK PROSE. (5 cr, §3051-3052; prereq 1103 or 2 yrs high school Greek or Δ)
Selections from Lysias and/or Plato.

1111H-1122H. HONORS COURSE: BEGINNING CLASSICAL GREEK. (5 cr per qtr; prereq regis in honors program or high ability as indicated by college entrance records)

3051-3052. BEGINNING ANCIENT GREEK: ACCELERATED. (5 cr per qtr, §1101-1102, §1103, §1104; previous experience in another foreign language desirable)

3104. GREEK PROSE. (5 cr, §1104; prereq 3052 or 3002 or equiv or #)
Classical Greek prose.

3105. GREEK DRAMA. (5 cr; prereq 1104 or Δ)
Euripides.

3106. GREEK POETRY. (5 cr; prereq 1122 or 3052 or 3105 or Δ)
Selections from Homer.

3120. THE GREEK NEW TESTAMENT. (5 cr per qtr [10 cr max]; prereq 1104 or 1122 or 3052 or 3106 or #, Δ)
Emphasis on reading proficiency. No text read more than once every three years.

3450. ADVANCED UNDERGRADUATE GREEK READINGS. (5 cr; prereq 3106 or 5 cr of 3120 or 3 yrs high school Greek or Δ)
Authors not listed in the main 3451-3457 sequence.

3451, 3452, 3453, 3454, 3455, 3456, 3457, 3458. ADVANCED UNDERGRADUATE GREEK. (5 cr per qtr; prereq 3106 or 5 cr of 3120 or 3 yrs high school Greek or Δ)
A cycle, with one course offered each quarter. *3451:* Homer. *3452:* Herodotus. *3453:* Sophocles. *3454:* Thucydides. *3455:* Aristophanes. *3456:* Plato. *3457:* Euripides. *3458:* Orators.

3474. ADVANCED UNDERGRADUATE GREEK: BYZANTINE GREEK. (5 cr; prereq 3106 or 5 cr of 3120 or 3 yrs high school Greek or Δ)

3951. MAJOR PROJECT. (5 cr; prereq Greek-Latin or Greek major, three 3xxx courses in Greek or #)
Research paper using the documents and other sources of Greece and Rome. Students select a topic in consultation with a faculty member whose interests are close to theirs.

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq #, Δ)
Guided individual reading or study.

5012. PROSE COMPOSITION. (4 cr; prereq 3106 or Δ) Keuls

5121. BIBLICAL AND PATRISTIC GREEK. (4 cr; prereq 3106 or 3120 or Δ) Sellew
Septuagint, Philo, Josephus, New Testament, Apostolic Fathers, and other patristic literature to 5th century A.D. Reading and discussion of selected texts in the major genres.

5310, 5320, 5330, 5340, 5350, 5360, 5370, 5380, 5390. GREEK LITERATURE. (4 cr per qtr [12 cr max in each course])
One or more appropriate authors studied in each course. Authors vary from term to term and year to year. *5310:* Oratory. *5320:* Tragedy. *5330:* Comedy. *5340:* History. *5350:* Philosophy. *5360:* Religious Texts. *5370:* Epic. *5380:* Lyric. *5390:* Romance.

5715. INTRODUCTION TO CLASSICAL PHILOLOGY. (4 cr, §Lat 5715) Sheets
Historical grammar of Greek and Latin from their Indo-European origin to the classical norms.

5716. HISTORY OF GREEK. (4 cr; prereq Grk/Lat 5715 or equiv, 2 yrs Greek) Sheets
Reading and analysis of documents illustrating the evolution of the Greek language from Mycenaean to modern times.

5718. GREEK DIALECTS. (4 cr; prereq 3 yrs Greek or #) Sheets
The nature and extent of dialectal variation within Ancient Greek; reading and analysis of inscriptions and earlier Greek literature.

5810. BYZANTINE TEXTS. (4 cr per qtr [12 cr max]; prereq 2 yrs Classical Greek or #)
Representative texts of original Byzantine literature.

5970. DIRECTED STUDIES. (1-5 cr per qtr; prereq #, Δ)
Guided individual reading or study.

5980. DIRECTED INSTRUCTION. (Cr ar; prereq #, Δ)

5990. DIRECTED RESEARCH. (Cr ar)

Coptic (Copt)

- 5011-5012. ELEMENTARY COPTIC.** (4 cr per qtr; prereq some knowledge of another ancient language, preferably Greek)
5011: Introduction to Coptic grammar and vocabulary (Sahidic dialect); *5012*: Further instruction in grammar, introduction to other dialects; first readings of texts.
- 5300. READINGS IN COPTIC.** (4 cr per qtr [12 cr max]; prereq Copt 5012 or equiv)
 Advanced reading in a variety of Coptic literature, such as Nag Hammadi treatises, Hermetic writings, and Egyptian monastic texts. Authors vary from year to year.

Latin (Lat)

- 1101-1102. BEGINNING LATIN.** (5 cr per qtr; prereq 1101 or equiv for 1102)
- 1103. SELECTIONS FROM LATIN LITERATURE.** (5 cr, §3051-3052; prereq 1102 or equiv)
 Prose and poetry.
- 1104. LATIN PROSE.** (5 cr; prereq 1103 or 3 yrs high school Latin or Δ)
 Selections from Caesar and Cicero.
- 1111H-1122H. HONORS COURSE: BEGINNING LATIN.** (5 cr per qtr; prereq regis in honors program or high ability as indicated by college entrance records)
- 3051-3052. ACCELERATED BEGINNING LATIN.** (5 cr per qtr, §1101-1102, §1103, §1104; previous experience in another foreign language desirable)
- 3104. LATIN PROSE.** (5 cr; prereq 3052 or 3002)
 Latin Republican prose.
- 3105. LATIN POETRY.** (5 cr; prereq 1104 or Δ)
 Selections from Catullus and Ovid.
- 3106. LATIN POETRY.** (5 cr; prereq 1122 or 3052 or 3105 or Δ)
 Selected books from Virgil's Aeneid.
- 3440. ADVANCED UNDERGRADUATE LATIN: LATER LATIN AUTHORS.** (5 cr per qtr; prereq 3106 or 4 yrs high school Latin or Δ)
 Reading course covering Latin authors of Late Antiquity, the Middle Ages, and the Renaissance. Authors vary.
- 3450. ADVANCED UNDERGRADUATE LATIN READING.** (5 cr; prereq 3106 or 5 cr of 3420 or 3 yrs high school Latin or Δ)
 Authors not listed in the main 3451-3458 sequence.
- 3451, 3452, 3453, 3454, 3455, 3456, 3457, 3458. ADVANCED UNDERGRADUATE LATIN.** (5 cr per qtr; prereq 3106 or 4 yrs high school Latin or Δ)
 A cycle, with one course offered each quarter. *3451*: Comedy. *3452*: Cicero. *3453*: Lucretius. *3454*: Livy. *3455*: Virgil. *3456*: Petronius. *3457*: Horace. *3458*: Tacitus.

- 3951. MAJOR PROJECT.** (5 cr; prereq Latin major, three 3xxx courses in Latin or #)
 Research paper using the documents and other sources of Greece and Rome. Students select a topic in consultation with a faculty member whose interests are close to theirs.
- 3970. DIRECTED STUDIES.** (1-5 cr per qtr; prereq #, Δ)
 Guided individual reading or study.
- 5012. PROSE COMPOSITION.** (4 cr; prereq 3106 or Δ) Keuls
- 5310, 5320, 5330, 5340, 5350, 5360, 5370, 5380, 5390. LATIN LITERATURE.** (4 cr per qtr [12 cr max for each course])
 One or more appropriate authors studied in each course. Authors vary from term to term and year to year. *5310*: History. *5320*: Epistles and Essays. *5330*: Oratory. *5340*: Epic and Pastoral. *5350*: Lyric and Elegiac Poetry. *5360*: Drama. *5370*: Satire. *5380*: Law. *5390*: Religious Texts.
- 5410. LATIN LITERATURE OF ANTIQUITY.** (4 cr [12 cr max])
 Pagan and Christian Latin literature selected from authors between 3rd and 8th centuries.
- 5420. MEDIEVAL LATIN.** (4 cr; prereq #) Nicholson
 Literature from 5th to 12th centuries; Carolingian and 12th-century Renaissance.
- 5430. RENAISSANCE LATIN.** (4 cr; prereq #)
 Survey of Renaissance Latin literature.
- 5621. LATIN PALEOGRAPHY.** (4 cr; prereq three 3xxx-5xxx Latin cr or #) Aris
 Analysis of various hands used in manuscripts of Latin authors with attention to date and provenance; transmission of ancient Latin literature.
- 5715. INTRODUCTION TO CLASSICAL PHILOLOGY.** (4 cr, §Grk 5715) Sheets
 Historical grammar of Greek and Latin from their Indo-European origin to the classical norms.
- 5717. HISTORY OF LATIN.** (4 cr; prereq Grk/Lat 5715 or equiv or #, 2 yrs Latin) Sheets
 Reading and analysis of documents illustrating the evolution of the Latin language from its earliest attestations to late antiquity.
- 5970. DIRECTED STUDIES.** (1-5 cr per qtr; prereq #, Δ)
 Guided individual reading or study.
- 5980. DIRECTED INSTRUCTION.** (Cr ar; prereq #, Δ)
- 5990. DIRECTED RESEARCH.** (Cr ar)

Major Requirements and Course Descriptions

Classics (Clas)

Knowledge of Greek and Latin is not required for these courses. They may be of interest to students of literature, history, art history, and archaeology. Many may be applied to majors in classical civilization (see separate listing) and satisfy related coursework requirements for majors in Greek, Latin, or Greek-Latin.

Literature and Culture

1001. AGE OF HOMER. (4 cr)

Study of Homer and his epics; Trojan War. Other early Greek epics and the archaic period of tyrants and lyric poets; rise of Greek philosophy.

1002. AGE OF PERICLES. (4 cr)

"Golden age" of Athens in 5th century B.C. Emergence of Athenian democracy and origins of tragedy, comedy, and history; art and architecture.

1003. AGE OF ALEXANDER. (4 cr)

Military conquests of Alexander the Great and their results; Hellenistic philosophy, art, science, religion, and literature.

1004. AGE OF CAESAR. (4 cr)

Roman Republic from its origins to Caesar's death.

1005. AGE OF AUGUSTUS. (4 cr)

"Golden age" of Latin literature; the monuments. Transition from republic to empire.

1006. AGE OF NERO. (4 cr)

The Roman Empire; "silver age" of Latin literature and rise of Christianity; art and architecture.

1023. AGE OF CONSTANTINE THE GREAT. (4 cr, §3023) Nicholson

Change and continuity in the Roman Empire from its zenith in the 2nd century through the 3rd century crisis to the New Empire of Diocletian and Constantine, the first Christian emperor (circa A.D. 180 to 363). Proscription of Classical paganism; Christianity as imperial religion.

1024. AGE OF SAINT AUGUSTINE OF HIPPO. (4 cr, §3024) Nicholson

Replacement of the Roman Empire in Western Europe by barbarian kingdoms (A.D. 363 to circa 500); consolidation of Constantinople as capital in the East. Literature, art, and thought resulting from Christianity becoming the religion of the Empire; pagan resistance.

1025. AGE OF JUSTINIAN AND MUHAMMAD. (4 cr, §3025) Nicholson

Transformation of the Roman Empire in Europe into barbarian kingdoms (circa A.D. 500 to circa 700). "Golden age" of the Eastern Roman Empire under Emperor Justinian. Tension between Rome and Persia; rise of Islam; Arab invasions.

1042. GREEK AND ROMAN MYTHOLOGY I. (4 cr)

Heroes, gods, and goddesses of ancient Greece and Rome. The myths and the stories behind them.

1043. INTRODUCTION TO GREEK AND ROMAN ARCHAEOLOGY. (4 cr)

Archaeological evidence on selected aspects of daily life in prehistoric and classic times, including activities such as food-producing, town-building, and craft industries of Greek and Italian townspeople.

1061. INTRODUCTION TO BYZANTINE CIVILIZATION. (4 cr, §5061) Nicholson

Greco-Roman backgrounds of Byzantine civilization. Culture of the Eastern Empire through the study of history, religion, education, art, literature in translation.

1201. THE OLYMPIC GAMES. (4 cr, §3201, §CICv 3201) Cooper

Survey of Olympic Games from 776 B.C. to A.D. 338 and comparison to other ancient and modern athletic festivals. Slides illustrate the sites and athletic events. Vectors and their trophies discussed.

3001. GREEK, ROMAN LYRIC POETRY IN TRANSLATION. (4 cr, §5001; prereq 2 courses in English literature beyond Engl 1002 or in foreign literature or Δ) Clayton, Krevans

Readings in translation from Greek lyric poets; Catullus, Horace, and minor Latin lyricists; cultural patterns of the times; survival of such poetry in modern times.

3007. THE PASTORAL TRADITION. (4 cr, §5007; prereq 2 courses in literature or #) Krevans

Origins and development of pastoral poetry and prose. Readings in English translation from Greek and Latin pastoral poets, and vernacular imitations of the Middle ages and Renaissance. Nature of allegory, "debate-poems," *pastourelle*, genre of pastoral.

3011. THE WORLD OF GREECE. (4 cr, §5011)

General survey of Greek civilization from the world of Homer to age of Alexander. Greek view of life as seen in art, history, literature, and philosophy. Golden age of Greece in fifth century B.C. and expansion of greek spirit under Alexander. Summers and evenings.

3012. THE WORLD OF ROME. (4 cr, §5012)

General survey of Roman civilization from its origins to reign of Constantine. Roman way of life as seen in art, history, literature, and philosophy. Etruscans and golden age of Rome under Augustus. Summers and evenings.

3023. AGE OF CONSTANTINE THE GREAT. (4 cr, §1023; prereq soph) Nicholson

See Clas 1023. Additional reading of sources in translation for students in 3023.

3024. AGE OF SAINT AUGUSTINE OF HIPPO. (4 cr, §1024; prereq soph) Nicholson

See Clas 1024. Additional reading of sources in translation for students in 3024.

3025. AGE OF JUSTINIAN AND MUHAMMAD.

(4 cr, §1025; prereq soph) Nicholson
See Clas 1025. Additional reading of sources in translation for students in 3025.

3035. MYTHOLOGY IN WESTERN ART. (4 cr, §ArH 3035)

Selected figures and events from classical mythology as ancient artists first depicted them and as they have reappeared in later Western art.

3071. GREEK AND HELLENISTIC RELIGIONS.

(4 cr, §5071, §ReIS 3071, §ReIS 5071) Sellw
Greek religion of the archaic, classical, and Hellenistic periods. Eclipse of city-state and "failure of nerve." Mystery religions and impact of Eastern cults. Ancient myths and need for allegory. Ruler worship. Gnosticism. Judaism in Greek world; Dead Sea Scrolls.

3072. THE NEW TESTAMENT. (4 cr, §5072, §ReIS 3072, §ReIS 5072) Sellw

First-century Israel under Roman rule. Jesus of Nazareth. Earliest Christian communities. Jewish Christianity. Mission to Gentiles. Paul the apostle. Beginnings of the New Testament.

3073. ROMAN RELIGION AND EARLY CHRISTIANITY.

(4 cr, §5073, §ReIS 3073, §ReIS 5073) Sellw
Etruscans. Republican religion. Appeal of non-Roman cults. Ruler worship. Christians in Asia Minor, Egypt, and the West. Popular piety, Christian and non-Christian. Rabbinic Judaism. Varieties of Christianity in 2nd and 3rd centuries. Influence of Greco-Roman culture on emerging church. Constantine and Julian.

3081. CLASSICAL EPIC IN TRANSLATION. (4 cr, §5081)

Homer's *Iliad* and *Odyssey*, Virgil's *Aeneid*; cultural context of epic, the heroic character, epic formulas, poetic techniques.

3082. GREEK TRAGEDY IN TRANSLATION (AESCHYLUS, SOPHOCLES, EURIPIDES). (4 cr, §5082)

Origin of European drama as a distinct literary form; characteristics of Greek tragedy; ancient theatres and theatrical conventions. Selected tragedies. Problems related to cultural patterns of the time.

3083. ARISTOPHANES AND ROMAN DRAMA IN TRANSLATION (ARISTOPHANES, MENANDER, PLAUTUS, TERENCE, SENECA). (4 cr, §5083)

Greek and Roman comic theatre; several comedies discussed. Roman tragic drama as exemplified by tragedies of Seneca.

3090. TOPICS IN GREEK PHILOSOPHY. (4 cr, §5090; prereq #) Belfiore

Selected topics in ancient Greek philosophy. Topics specified in the *Class Schedule*.

3145. GREEK AND ROMAN MYTHOLOGY II: ANALYSIS AND TRADITION. (4 cr; prereq 1042 or #)

Methods of interpreting Greco-Roman myth, from Homer to Freud, Jung, and Levi-Strauss; artistic survival of classical myth in literature, painting, and music.

3201. THE OLYMPIC GAMES. (4 cr, §1201, §ClCv 3201) Cooper

For description, see 1201.

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq #, Δ)

Guided individual reading or study.

5001. GREEK, ROMAN LYRIC POETRY IN TRANSLATION.

(4 cr, §3001, prereq 2 courses in English literature beyond Engl 1002 or in foreign literature or Δ) Clayton, Krevans
For description, see 3001.

5007. THE PASTORAL TRADITION. (4 cr, §3007;

prereq 2 courses in literature or #) Krevans
Meets with 3007. Additional work for graduate credit.

5011. THE WORLD OF GREECE. (4 cr, §3011)

Meets with 3011. Additional work for graduate credit.

5012. THE WORLD OF ROME. (4 cr, §3012)

Meets with 3012. Additional work for graduate credit.

5013. ROMAN LAW AND SOCIETY. (4 cr) Sheets

Roman law as a social institution: basic concepts of persons, property, obligations in historical and social perspectives.

5061. INTRODUCTION TO BYZANTINE CIVILIZATION. (4 cr, §1061) Alchermes

For description, see 1061.

5071. GREEK AND HELLENISTIC RELIGIONS.

(4 cr, §3071, §ReIS 3071, §ReIS 5071) Sellw
Meets with 3071. Additional work for graduate credit.

5072. THE NEW TESTAMENT. (4 cr, §3072, §ReIS 3072, §ReIS 5072) Sellw

Meets with 3072. Additional work for graduate credit.

5073. ROMAN RELIGION AND EARLY CHRISTIANITY.

(4 cr, §3073, §ReIS 3073, §ReIS 5073) Sellw
Meets with 3073. Additional work for graduate credit.

5080. NEW TESTAMENT PROSEMINAR. (4 cr per

qtr [12 cr max]; prereq 3072 or 5072 or #) Sellw
Selected topics in study of the New Testament and related ancient literatures. Topics specified in the *Class Schedule*.

5081. CLASSICAL EPIC IN TRANSLATION. (4 cr, §3081)

Meets with 3081. Advanced independent work required.

Major Requirements and Course Descriptions

5082. GREEK TRAGEDY IN TRANSLATION (AESCHYLUS, SOPHOCLES, EURIPIDES). (4 cr, §3082)

Meets with 3082. Additional independent work required.

5083. ARISTOPHANES AND ROMAN DRAMA IN TRANSLATION (ARISTOPHANES, MENANDER, PLAUTUS, TERENCE, SENECA). (4 cr, §3083)

Meets with 3083. Advanced independent work required.

5085. GREEK PHILOSOPHY: THE PRESOCRATICS TO PLATO. (4 cr; prereq jr)

Fragments of the Presocratics and Sophists and selected dialogues of Plato.

5090. TOPICS IN GREEK PHILOSOPHY. (4 cr, §3090; prereq #)

Meets with 3090. Additional work for graduate credit.

5145. CLASSICAL MYTHOLOGY: METHODOLOGY, INTERPRETATION, AND TRADITION.

(4 cr, §3145; prereq 1042 or #)

Same classwork as 3145; independent reading and research assignments in consultation with the instructor.

5794. PROSEMINAR: INTRODUCTION TO CLASSICAL STUDIES. (1 cr; prereq grad or #)

Research in classical scholarship, methods, bibliography, textual history, and criticism.

5970. DIRECTED STUDIES. (1-5 cr per qtr; prereq #, Δ)

Guided individual reading or study.

Art and Archaeology

1043. INTRODUCTION TO GREEK AND ROMAN ARCHAEOLOGY. (4 cr)

Archaeological evidence about daily life in prehistoric and classical times; food production, town building, and craft industries of Greece and Italy.

3008. HISTORY OF ANCIENT ART. (4 cr, §ArtH 3008) Cooper, McNally

Architecture, sculpture, and painting of selected early cultures; influences contributing to the development of Western art.

3142. ARTS OF EGYPT AND THE NEAR EAST.

(4 cr, §ArtH 3142) Cooper, McNally

Arts and architecture of Egypt, Mesopotamia, and Persia from prehistoric times to the conquests of Alexander the Great.

3152. GREEK ART AND ARCHAEOLOGY. (5 cr,

§ArtH 3152) Cooper, McNally

Architecture, sculpture, painting, and archaeology from 1050 B.C. to 31 B.C.

3162. ROMAN ART AND ARCHAEOLOGY. (5 cr,

§ArtH 3162) Cooper, McNally

Roman art and material culture: origins, change, continuity, "progress" or "decay" in the later empire.

3175. THE TOPOGRAPHY OF A MEDIEVAL CITY: CONSTANTINOPLE. (4 cr, §5175, §ArtH 5175) Alcherms

Study of Constantinople, a world capital and imperial residence for more than a millennium. Original and translated texts and archaeological evidence used to reconstruct individual monuments and broader patterns of urban life and urbanistic development from circa 200 until the Turkish conquest of 1453.

3252. HISTORY OF EARLY CHRISTIAN REGIONS AND BYZANTINE ART. (4 cr, §ArtH 3252)

Architecture, sculpture, and painting in eastern Christian regions, from founding to fall of Constantinople. Meaning and broader cultural context in which works of art were created.

3340. PRACTICUM IN ARCHAEOLOGICAL FIELD TECHNIQUES. (4 cr, §5340, §Clcv 3340;

prereq Grk or Lat or Hebr or ANE or Clcv major or #, one course in ancient art or archaeology) Cooper
Introduction to methods used for excavation on classical sites. Meets at selected site in Minnesota for day-long sessions for one half quarter. Format arranged according to actual procedures in field.

5089. INTRODUCTION TO BIBLICAL ARCHAEOLOGY. (4 cr, §RelS 5089)

Archaeological data relevant to the Jewish scriptures and the New Testament; major sites in the Holy Land and in other areas of the Mediterranean and the Near East. The evidence of pottery, inscriptions, manuscripts, and coins. Excavation methods. Archaeology as a tool for study of ancient religions. Requires additional work for graduate credit.

5101. INTRODUCTION TO PREHISTORIC GREEK ARCHAEOLOGY. (4 cr; prereq jr or #)

Aims and methods of modern field archaeology; the record of human habitation in the Aegean area from earliest times to the end of the Bronze Age; concentration on the Mycenaean period. Archaeological evidence as the basis for historical reconstruction.

5102. CLASSICAL GREEK ART. (5 cr, §ArtH 5102)

Architecture, sculpture, and painting in Greece from the Persian Wars to the conquests of Alexander.

5103. HELLENISTIC ART AND ARCHAEOLOGY.

(4 cr, §ArtH 5103; prereq jr or sr or #)

Sculpture, architecture, painting, and topography in developing centers of Hellenistic culture in eastern Mediterranean from 400 B.C. to end of Hellenistic period.

5104. ROMAN ARCHITECTURE. (5 cr, §ArtH

5104; prereq jr or #) Cooper, McNally

Buildings in Rome and the empire from the 5th century B.C. to A.D. 4th century. Major archaeological sites.

5105. ROMAN PAINTING AND MOSAICS. (5 cr,

§ArtH 5105; prereq jr or #) McNally

Roman painting and mosaics; specific problems; sites such as Pompeii and Antioch.

5106. GREEK PAINTING. (5 cr, §ArtH 5106; prereq jr or #) McNally
Research and analysis in classical art as applied to the study of vases, original objects, and sources.

5107. ROMAN SCULPTURE. (4 cr, §ArtH 5107; prereq jr or #) Cooper, McNally
Sculpture of Rome and its provinces from the 1st century B.C. to A.D. 4th century; role of sculpture in Roman politics and religion.

5108. GREEK ARCHITECTURE. (4 cr, §ArtH 5108; prereq jr or #) Cooper
Archaic and classical examples of religious and secular architecture and their setting in major archaeological sites.

5110. PROSEMINAR: CLASSICAL ARCHAEOLOGY. (4 cr; prereq #)

5111. BRONZE AGE ART AND ARCHITECTURE IN GREECE, CA. 3000-1100 B.C. (4 cr, §ArtH 5111)
Artistic and architectural forms in Neolithic period in Aegean area and Cycladic, Minoan, and Mycenaean cultures.

5113. ARCHAIC GREEK ART. (4 cr, §ArtH 5113; prereq jr or #)
Architecture, sculpture, and painting in Greek lands from 9th through 5th centuries B.C. Examination of material remains of Greek culture; archaeological problems such as identifying and dating buildings; analysis of methods and techniques.

5120. FIELD RESEARCH IN ARCHAEOLOGY. (3-6 cr per qtr, §ArtH 5120; prereq #)
Field excavation, survey, and research at archaeological sites in the Mediterranean area. Techniques of excavation and exploration; interpretation of archaeological materials.

5252. HISTORY OF EARLY CHRISTIAN AND BYZANTINE ART. (4 cr, §ArtH 5252)
Architecture, sculpture, and painting in eastern Christian regions from the founding to the fall of Constantinople in the 15th century. Emphasis on meaning and broader cultural context in which works of art were created.

5340. PRACTICUM IN ARCHAEOLOGICAL FIELD TECHNIQUES. (4 cr, §3340, §Clcv 3340; prereq Grk or Lat or Hebr or ANE or Clcv major or #, one course in ancient art or archaeology) Cooper
Meets with 3340. Additional work for graduate credit.

Greek and Latin Word Roots

1045. BASIC PROGRAM IN TECHNICAL TERMINOLOGY AND WORD STUDY. (3 cr)
Study of prefixes, suffixes, and high frequency roots from Greek and Latin through computer-assisted instruction; principles of word compounding; methods and techniques of word analysis.

1048. GREEK AND LATIN TERMINOLOGY IN THE MEDICAL AND BIOLOGICAL SCIENCES. (2 cr, §1141; prereq 1045 or ¶1045)
Study of roots and terms basic to the medical and biological sciences in English contexts.

1141. GREEK AND LATIN TERMINOLOGY FOR NURSING. (3 cr, §1048)
Greek and Latin prefixes, suffixes, and roots basic to the vocabulary of nursing through computer-assisted instruction.

3046. ADVANCED ETYMOLOGY: VOCABULARY OF THE SCIENCES AND HUMANITIES. (2 cr; prereq 1045 or ¶1045)
Latin and Greek roots with English derivatives; regularities of linguistic change (Grimm's law), principles of etymology, and lessons on specialized terminology in various fields. Computer-assisted instruction.

Akkadian (Akka)

5011-5012-5013. ELEMENTARY AKKADIAN. (4 cr per qtr; for advanced undergrads by permission only and for grads) Reisman
Cuneiform script. Akkadian grammar, written drills, readings from historical annals, law collections, religious, and epic literature.

Ancient Near Eastern Studies (ANE)

1001/3001. THE BIBLE: NARRATIVE TEXTS. (4 cr, §ReIS 3201)
Survey of literary and historical narrative texts from: Pentateuch, Joshua, Judges, Samuel, and Kings. Reading of extensive selections from Bible and secondary materials discussing literary background of the texts.

1002/3002. THE BIBLE: PROPHECY. (4 cr, §ReIS 3202)
Survey of Israelite Prophets, with emphasis on Amos, Hosea, Isaiah, Jeremiah, Ezekiel, and Second Isaiah. Prophetic contributions to Israelite religion, personality of prophets, politics, and prophetic reaction. Introduction to textual analysis and biblical scholarship.

1003/3003. THE BIBLE: WISDOM, POETRY, AND APOCALYPTIC. (4 cr, §ReIS 3203) Zahavy
Survey of books of Psalms, Proverbs, Job, Song of Songs, Lamentations, Ecclesiastes (Qoheleth). Characteristics of biblical poetry. Conceptions of Israelite wisdom movement. Traits of early Jewish apocalyptic writings.

3101. ANCIENT NEAR EASTERN TEXTS IN TRANSLATION. (4 cr) Reisman
The Sumerian-Akkadian literary and historical tradition. Relationships of the Mesopotamian traditions, particularly to the Old Testament.

Major Requirements and Course Descriptions

3117. THE DEAD SEA SCROLLS: THE INTER-TESTAMENTAL PERIOD. (4 cr, §ReIS 3117) Zahavy Jewish Sectarianism in pre-Christian period and position of Dead Sea Sect. Qumran texts read in English, emphasizing communal organization, modes of worship, theology, and messiah concept as a precursor to later religious developments.

3251. THE MODERN STUDY OF THE OLD TESTAMENT. (4 cr, §ReIS 3251)
Methods used in studying the Old Testament, including textual criticism, the anthropological approach, form criticism, the sociological approach, the history of religion, and the uses of archaeology in interpreting the text.

3501, 3502, 3505. ANCIENT ISRAEL. (4 cr per qtr, §5505, §ReIS 3501, §ReIS 3502, §ReIS 3505, §ReIS 5505) Zahavy
History of Israel and development of its religion from earliest times through the intertestamental period. *3501*: The foundation of the Hebrew people; patriarchal period; development of Israelite religious and legal institutions; conquest of Canaan; development of the monarchy and the united kingdom. *3502*: The divided kingdom; classical prophecy, destruction, exile, and restoration. *3505*: The Hellenistic period. Period of Ezra and Nehemiah, Samaritans, apocalyptic and other eschatological types; the Maccabean period; Sadducees, Pharisees, Zealots, Christians, Qumran, wisdom literature; Philo, Josephus; Jewish rights during Roman Empire. Evaluation of sources for historical reliability. Knowledge of Hebrew not required.

5501, 5502. ANCIENT ISRAEL. (4 cr per qtr, §3501, §3502, §ReIS 3501, §ReIS 3502; no knowledge of Hebrew required; prereq grad or #)
History of Israel and development of its religion, from earliest times through intertestamental period. *5501*: formation of Hebrew people; patriarchal period; development of Israelite religious and legal institutions; conquest of Canaan; development of monarch of United Kingdom. *5502*: divided kingdom; classical prophecy, destruction, exile, and restoration.

5505. ANCIENT ISRAEL. (4 cr per qtr, §3505, §ReIS 3505, §ReIS 5505; prereq grad or #) Zahavy
Students attend lectures of 3505 but follow a special syllabus. Knowledge of Hebrew not required.

5970. DIRECTED STUDIES. (1-4 cr per qtr; prereq #)
Guided individual reading or study.

Aramaic (Arm)

5011, 5012. ARAMAIC. (4 cr per qtr; prereq 1 yr Hebrew or Arabic or #; for students preparing for biblical studies, ancient history majors, and students specializing in Semitic languages; recommended for students of Talmud) Reisman
5011: Biblical Aramaic—grammar, fluency in reading biblical and ancient Aramaic. *5012*: Syriac—grammar, fluency of reading Syriac texts.

Hebrew (Hebr)

1012-1013. BEGINNING HEBREW FOR STUDENTS WITH PRIOR EXPOSURE. (5 cr per qtr [total 15 cr for students who complete the sequence], §1101-1102-1103)

For students familiar with the Hebrew alphabet and with some previous study of elementary Hebrew.

1101f-1102w-1103s. BEGINNING HEBREW. (5 cr per qtr; prereq # if Hebrew studied previously)
Speaking, reading, and writing modern Hebrew. Aural comprehension, pronunciation, basic grammar, biblical syntax.

3011f-3012w-3013s. INTERMEDIATE HEBREW. (5 cr per qtr; prereq 1103 or qualified fr or #)
Modern short stories, contemporary idiom, newspaper articles, biblical narratives. Review of fundamentals of grammar. Emphasizes development of fluent speech and composition.

3015f-3016w-3017s. ADVANCED MODERN HEBREW. (4 cr per qtr; prereq 3013 or #)
Further development of fluent speech and self-expression in composition; introduction to advanced literature and the Hebrew press. Exposure to a variety of literary styles and genres.

3111, 3112. RABBINIC TEXTS. (4 cr per qtr; prereq 3013, 3017 or 3202 or #) Zahavy
Selections from Mishnah, Tosefta, Talmud, Midrash, Codes. Critical scholarship. Use of material for history of Judaism.

3121. MEDIEVAL HEBREW LITERATURE. (4 cr per qtr; prereq 3013 or #) Zahavy
Medieval Bible commentaries; Rashi, Rashbam, Ibn Ezra, Nachmanides, others. Sources in Talmud and Midrash. Contributions of commentaries and their methods. Especially recommended for students of biblical literature.

3131, 3132. TALMUDIC TEXTS. (4 cr per qtr; prereq 3013 or 3017 or 3202 or #) Zahavy
Study of a tractate of Talmud: Mishnah, Tosefta, Babli, and Yerushalmi. Literary critical methods. Redactional and historical problems.

3201, 3202, 3203. READINGS IN BIBLICAL HEBREW. (4 cr per qtr; prereq 1103 or 1104 or #)
Textual study of the Bible, basic research tools, and commentaries. Exegesis; development of reading fluency and familiarity with the biblical text.

3204, 3205. A BOOK OF THE BIBLE. (4 cr per qtr; prereq 3013 or #)
Scientific study of a book of the Bible. Modern scholarly trends and medieval exegesis. Analysis of a selected text.

3204H, 3205H. HONORS COURSE: A BOOK OF THE BIBLE. (4 cr per qtr; prereq 3013 or #)
Students attend lectures in 3204, 3205, and complete additional assignments.

3301. MODERN HEBREW ESSAY. (4 cr; prereq 3017 or #)
Works from 19th- and 20th-century Hebrew essayists. Jewish nationalism, literary criticism, social and political issues, religion, philosophy.

3304. MODERN HEBREW SHORT STORY. (4 cr; prereq 3017 or #)
Works of Agnon, Hazaz, Yizhar, Yehoshua, and others. The disintegration of traditional society, freedom, militarism, alienation, genocide, and other themes.

3307. MODERN HEBREW POETRY. (4 cr; prereq 3017 or #)
Major Israeli poets such as Rachel, Lamdan, Shlonsky, Leah Goldberg, Alterman, Greenberg, Pagis, Amihai, Ravikovitch, and others.

3980. DIRECTED INSTRUCTION. (1-5 cr per qtr; prereq #)
Observation and discussion of language classes. Gradually increased participation of student in preparation and presentation of instructional materials to an elementary class. Evaluation of materials, teaching techniques. Seminars with instructor and staff on problems of language teaching.

5970. DIRECTED READINGS. (Cr ar; prereq 3013 or #)
Special problems for advanced students.

5990. HONORS COURSE: RESEARCH. (Cr ar; prereq 5970 or #)
Independent research under guidance of faculty member. Must begin fall quarter.

Sumerian (Sum)

5011-5012. ELEMENTARY SUMERIAN. (4 cr per qtr; for advanced undergrads with 2 yrs of another foreign language and for grads)
Sumerian writing and grammar. Readings from classical Sumerian literary and historical texts.

Communication Disorders (CDis)

Staff—Chair, Charles E. Speaks, 115 Shevlin Hall; **Director of Undergraduate Studies,** Shirley S. Doyle, 115 Shevlin Hall; **Director of Graduate Studies,** Patricia A. Broen, 115 Shevlin Hall

Professors: Broen, Davis, Margolis (Otolaryngology), Moller (Preventive Sciences), Nelson (Otolaryngology), Reichle, Siegel, Speaks, Starr, Van Tasell, Viemeister (Psychology), Ward (Otolaryngology)

Associate Professor: Haroldson

Assistant Professors: Liss, Schlauch, Windsor

Associate Clinical Specialists: Carlstrom, Doyle, Hinderscheit

Assistant Clinical Specialist: van Deusen

The curriculum of the Department of Communication Disorders focuses on the study of normal speech, language, and hearing, and the application of that knowledge to the identification, prevention, evaluation, and clinical management of disordered speech, language, and hearing.

Some students complete the speech and hearing science major and pursue vocational opportunities or graduate study in related fields. Others complete graduate work in speech-language pathology or audiology. The B.S. degree is appropriate preparation for further education and training as a speech-language pathologist, audiologist, or speech and hearing scientist. The M.A. programs in speech-language pathology and audiology provide the educational and clinical background required to qualify a student for the Certificate of Clinical Competence issued by the American Speech-Language-Hearing Association. If you are contemplating graduate study, consult the director of graduate studies early in your senior year.

General Education—5301, 5302, 5303, 5304¹, 5305, and 5306¹, which address the processes of normal hearing, speech, language, and voice, offer an understanding of the multidisciplinary foundations of human communication. Other courses, such as 3101, 5101, 5102, which survey problems of human communication, and 5502, 5504¹, 5507¹, 5508¹, 5509¹, 5606¹, 5607¹, 5608¹, 5611, 5701¹, 5703¹, and 5704¹, which deal with specific problems of human communication, may be of interest to students pursuing coursework in linguistics, psychology, child psychology, speech-communication, education, or medical and dental fields.

¹Prerequisites required.

Major Requirements and Course Descriptions

B.S. Major Sequence—Speech and Hearing Science

Required Preparatory Courses—Math

1111; Ling 3001 or 5001; Psy 1001, 1004-1005; Phys 1041/1045 and 1042/1046 or Biol 1009 and Phys 1041/1045 or Biol 1009 and Phys 1001

Major Requirements—5301, 5302, 5303, 5304 or 5306, 5305; CPsy 1301; Psy 3011, 3031; EPsy 5260

Four courses from 3101, 5304, 5306, 5502, 5504, 5507, 5508, 5509, 5606, 5607, 5608, 5611, 5701, 5702, 5703, 5704, 5705, 5706, 5707, 5900 (clinical issues and procedures)

One of the following groups:

1. at least two courses from CPsy 5341, 5343; Psy 3051, 3135, 5011

2. at least two courses from Ling 5006, 5201, 5202, 5302; CPsy 5345; Psy 5054; EPsy 5600

3. at least two courses from Math 1008, 1142, 1251, 1252

4. Psy 5012-5013, 5019

5. At least two courses from EPsy 5620 or CPsy 5315; EPsy 5608, 5609, 5622, 5710

B.A. Major Sequence—Speech and Hearing Science

The B.A. degree is appropriate for students who desire a broader liberal arts preparation than the B.S. degree provides. It is also an appropriate alternative to the B.S. degree for students who may seek further education and training as speech-language pathologists, audiologists, or speech and hearing scientists.

Required Preparatory Courses—Psy 1001, 1004-1005

Major Requirements—3101, 28 cr selected from among the following groups:

1. basic communication processes—5301, 5302, 5303, 5304, 5305, 5306

2. speech and language disorders—5502, 5504, 5507, 5508, 5509, 5606, 5607, 5608, 5611, 5900 (clinical issues and procedures)

3. disorders of the auditory system—5701, 5702, 5703, 5704, 5705, 5706, 5707, 5900 (clinical issues and procedures)

Major project (2 cr): paper completed in conjunction with extra credit registration in a course from one of the above groups or 5970

Minor Sequence—Speech and Hearing Science

Minor Requirements—Minimum of 15 cr selected from one or more of the following groups:

1. introductory and survey courses—3101, 5101, 5102

2. basic communication processes—5301, 5302, 5303, 5304, 5305, 5306

3. speech and language disorders—5502, 5504, 5507, 5508, 5509, 5606, 5607, 5608, 5611, 5900 (clinical issues and procedures)

4. disorders of the auditory system—5701, 5702, 5703, 5704, 5705, 5706, 5707, 5900 (clinical issues and procedures)

3100f,w,s,su. CLINICAL AND RESEARCH OBSERVATION. (2 cr per qtr; prereq Δ; S-N only)

Supervised observation of clinical procedures, such as evaluation and treatment of persons with communication disorders, or of research relating to normal and disordered communication.

3101f,s. INTRODUCTION TO COMMUNICATION DISORDERS. (4 cr) Haroldson, staff

Processes and impairments of human oral communication.

5101s. COMMUNICATION PROBLEMS OF CHILDREN. (3 cr; prereq non-speech and hearing science major; offered alt yrs) Doyle, staff

Problems of children with impaired communication due to delayed language development, hearing loss, articulation disorders, voice disorders, stuttering, cleft palate (oral-facial anomalies), and neuromuscular disorders. Communication disorders and their effects on speech and language development.

5102w. COMMUNICATION PROBLEMS OF ADULTS. (3 cr; prereq non-speech and hearing science major; offered alt yrs) Haroldson, staff

Problems of hearing, speech, language, and voice in adults for persons interested in human communication. Implications for familial, social, academic, and vocational adjustments.

5301f. INTRODUCTION TO ACOUSTICS. (5 cr)

Speaks
Elements of acoustics necessary to understand quantitative aspects of speech and hearing science, speech-language pathology, and audiology. Nature of sound, sound transmission, units of measurement, acoustic characteristics of speech, and elementary electronics.

5302f. ANATOMY AND PHYSIOLOGY OF THE SPEECH AND HEARING MECHANISMS. (4 cr)

Liss
Gross anatomy, physiology, and function of structures related to phonation, articulation, and audition.

5303f. PHONETICS LABORATORY. (2 cr) Broen

Phonetic analysis of speech, the IPA classification system and articulatory correlates of English phonemes. Laboratory transcription of isolated sounds, words, and connected speech.

5304w. SPEECH SCIENCE. (4 cr; prereq 5301, 5302, 5303 or #) Speaks, Van Tasell

Acoustic characteristics of speech. Theories of and review of research in speech production and speech perception. Techniques for speech analysis and synthesis.

5305f. LANGUAGE ACQUISITION. (4 cr) Windsor

Theory and experimental research dealing with language development.

5306s. HEARING SCIENCE. (4 cr; prereq 5301, 5302 or #) Ward

Fundamental concepts in normal audition. Psychoacoustic methods; sensitivity and acuity; loudness, pitch, timbre; distortion, aural harmonics; masking, adaptation; auditory reflex, binaural phenomena, localization.

5502s. STUTTERING. (4 cr) Haroldson

Description, nature, and treatment of stuttering in children and adults. Involvement in therapeutic and research activities.

5504w. NORMAL AND DISORDERED CHILD PHONOLOGY. (4 cr; prereq 5302, 5303 or #) Broen

Theory and research relating to normal and disordered phonological development. Emphasis on assessment and treatment of phonological disorders.

5507f. CLEFT PALATE, ORAL-FACIAL ANOMALIES AND SPEECH. (4 cr; prereq 5304, 5504 or #) Moller, Starr

Relationships between oral-facial structures and speech. Speech problems associated with dental and palatal anomalies and their clinical management. Observations of clinical activities.

5508w. VOICE DISORDERS. (4 cr; prereq 5304 or #) Haroldson, Starr

Physical and physiological bases of normal voice production. Voice disorders (pitch, loudness, quality) and their symptomatology, etiology, and clinical management. Laryngectomy. Other organic disorders.

5509w. MOTOR SPEECH DISORDERS. (4 cr; prereq 5304 or #5304) Liss

Nature, assessment, and treatment of motor speech disorders in adult and pediatric populations.

5606w. LANGUAGE ASSESSMENT AND INTERVENTION: EARLY STAGES. (4 cr; prereq 5305 or #) Reichle

Communication disorders in preschool-age children with special emphasis on the assessment and management of language disorders observed in children with developmental disabilities as well as intellectually normal children.

5607s. LANGUAGE ASSESSMENT AND INTERVENTION: LATER STAGES. (4 cr; prereq 5305 or #) Windsor

Language disorders in school-age children, with special emphasis on assessment and intervention.

5608s. LANGUAGE ASSESSMENT AND INTERVENTION: ADULTS. (4 cr; prereq 5302 or #) Brookshire

Language disorders in adolescent and adult populations, with special emphasis on assessment and intervention strategies applicable to aphasia and other neurogenic disorders.

5611f. AUGMENTATIVE SYSTEMS OF COMMUNICATION. (4 cr) Reichle

Equipment and instructional procedures used to establish communication board and signing skills in severely handicapped populations.

5701w. HEARING LOSS AND AUDIOMETRY.

(5 cr; prereq 5301, 5302 or #) Schlauch
Overview of hearing disorders: audiometric and medical correlates, medical and surgical management, effects on communication, and psychosocial adjustment. Basic audiometry: pure-tone audiometry, speech audiometry, screening, acoustic immittance. Laboratory.

5702f. ADVANCED AUDIOMETRY. (5 cr; prereq 5701 or #) Schlauch

Procedures for speech discrimination testing, pediatric testing, detection and evaluation of pseudohypacusis. Behavioral diagnostic procedures for determining site of lesion; auditory pathologies. Laboratory.

5703w. COMMUNICATION PROBLEMS OF THE HEARING IMPAIRED. (5 cr; prereq 5701 or #) Van Tasell, Carlstrom, van Deusen

Effects of hearing loss on development of language, perception, and production of speech, and psychosocial adjustment. Techniques for habilitation and rehabilitation of hearing-impaired children and adults, including use of amplification, speechreading, and auditory training. Basic instruction in finger spelling and elements of manual communication.

Major Requirements and Course Descriptions

5704su. NOISE AND HUMANKIND. (4 cr; prereq 5301 or #) Ward

Temporary and permanent effects of steady, intermittent, and impulse noise on hearing and health. Annoyance and community noise. Noise measurement, reduction, and control; ear defenders and their limitations. Hearing conservation programs; pre-employment testing and monitoring audiometry.

5705s. OBJECTIVE MEASURES OF AUDITORY FUNCTION. (3 cr; prereq 5701 or #; offered alt yrs) Margolis

Advanced techniques for clinical physiological evaluation of the auditory system. Acoustic immittance, auditory evoked potentials; electronystagmography, galvanic skin response, electrocardiac response. Laboratory.

5706f. HEARING AIDS. (4 cr; prereq 5701 or #) Van Tasell

Electroacoustic characteristics of personal hearing aids and group amplification systems. Acoustical principles of earmold design and modification. Selection of amplification for hearing-impaired children and adults.

5707s. AUDIOLOGY IN EDUCATIONAL SETTINGS. (3 cr; prereq 5703 or #; offered alt yrs) Carlstrom

Audiological services for hearing-impaired children in schools. Selection and maintenance of group amplification equipment. Acoustical evaluation of classrooms. Legal educational rights of hearing-impaired children. In-service training of other professionals who work with hearing-impaired school children.

5900. TOPICS IN COMMUNICATION DISORDERS. (1-4 cr per qtr)

5970f,w,s,su. DIRECTED STUDIES. (Cr ar; prereq #) Staff

Guided individual reading or study.

Comparative Literature (CLit)

Staff—Chair, Ronald Sousa, 350 Folwell Hall; *Director of Graduate Studies,* Rey Chow, 350 Folwell Hall

Professors: Armstrong, Sarles, Schulte-Sasse (German), Sousa (Spanish and Portuguese)

Associate Professor: Chow

Assistant Professors: Canning, Jha

Comparative literature deals with the study of the history, theory, and criticism of various national literatures in their interrelations, as well as in their relations to other disciplines. The following courses stress the development of critical perspectives that cut

across individual linguistic and cultural boundaries.

The program is being combined with the Humanities program to form the Department of Cultural Studies and Comparative Literature. The new department will offer an undergraduate major. For information contact the CLA Student Information Office, 214 Johnston Hall (612/625-2020).

For information about the department's graduate programs, contact the Graduate School's Prospective Student Services office, 307 Johnston Hall, University of Minnesota, 101 Pleasant Street S.E., Minneapolis, MN 55455.

1921. INTRODUCTION TO FILM STUDY. (4 cr, §ArH 1921) Staff

Fundamentals of film language and the major theories of film presented through detailed analysis of several films.

3215. CINEMA AND IDEOLOGY. (4 cr) Staff

Major aspects of film as discourse, emphasizing film's complex relation to ideological and political contexts. Specific films used to study cinema as institution, film as current product, and artistic ideologies in politics.

3332w. THE MODERN NOVEL IN A COMPARATIVE PERSPECTIVE. (4 cr; prereq reading knowledge of German, French, Spanish or #) Canning, staff
Relationship of modernity to the genre of the novel in Western Europe and the Americas. Notions of subjectivity and philosophical reflection as manifested by various novelists over various literary periods and geographical regions.

3910. ISSUES IN THE STUDY OF LITERATURE.

(1-4 cr; prereq jr or sr or #) Staff

Key issues in literary studies: periodization, genre, critical modality, problems of criticism. Topic for each offering specified in the *Class Schedule*.

3931. PROBLEMS IN STATELESS LITERATURES.

(4 cr; prereq reading knowledge of a foreign language) Jha, staff

Literatures not subsumed under national boundaries. The aesthetics of the governing nation in relation to governed communities in contrast to alternative communitarian modes of language use to relate history and construct identity.

3979. ISSUES IN CULTURAL PLURALISM. (4 cr; prereq ¶AmSt 3113) Sarles, staff

Critical, comparative basis for studying minority cultures in America: fabric, dynamics, strengths, tensions; how they differ, yet form a distinct culture.

5011, 5012. COMPARATIVE LITERARY THEORY.

(4 cr per qtr; prereq reading knowledge of German, French, Spanish or #; qualified students may regis for grad cr) Canning, Jha, Sousa
Introduction to literary theory and methods of criticism focusing on problems in interpretation and the nature of literary language, morphology of literary forms in relation to historical forces, ideological construction of gender and racial identity. *5011*: Problems of subjecthood and critical inquiry. *5012*: Concept of modernity and the role of the critical scholar.

5147. DYNAMICS OF PEDAGOGY IN HIGHER EDUCATION. (4 cr) Sarles, staff

Explores the nature of teaching and of the teacher. Considers teaching authority; dynamics of Socratic dialogue and relation of the teacher to students and to oneself in the present and future.

5165. PERSPECTIVES IN HUMAN BEHAVIOR.

(4 cr) Sarles, staff
Comparative basis for studying different disciplines, especially in the behavioral sciences. In-depth interviews demonstrate the nature of similarities, differences, and complementarities: integration and coherence vs. independence of disciplinary units.

5221. BASIC CONCEPTS OF CINEMA. (4 cr) Chow

Tools and knowledge necessary to place film in historical context, define major boundaries of film theory, and introduce basic concepts of film analysis. Comparative study of French, English, and American theories.

5233. LITERATURE AND FILM. (4 cr) Staff

Historical development of the relationships between literature and cinema; exploration of major theoretical and aesthetic problems these relationships have provoked; special attention to verbal and visual languages, literary discourse, and film discourse; film and modern fiction.

5241. THEORIES OF METAPHOR. (4 cr; prereq one course in linguistics or literary theory or philosophy) Sousa, staff

Studies in the theory of metaphor, with special attention to the problem of structure and interpretation of metaphors. The question of figural language; metaphor and semantic fields; the cognitive force of metaphor.

5331, 5332. THE EUROPEAN NOVEL, 1750-1950.

(4 cr per qtr; prereq reading knowledge of French or German) Staff
Development of the novel as an artistic genre; social and intellectual-historical factors. *5331*: 1750-1850, with emphasis on England, France, and Germany; includes the novels of Sterne, Rousseau, Goethe, Stendhal, Scott, Balzac, and E.T.A. Hoffman. *5332*: 1850-1950, with emphasis on England, France, Germany, and Spain; includes the novels of Dickens, Flaubert, Dostoevsky, Tolstoy, Zola, Joyce, Hesse, Mann, Unamuno, Cela, and Lawrence.

5401. TRANSLATION: THEORY AND PRACTICE.

(4 cr; prereq knowledge of French or German or Spanish or #) Sousa, staff
Analysis of translation as a language act, through examination of studies on theory of language and specifically on the theory and practice of translating as well as work on translation problems and discussion of translations already made.

5452. GENRE THEORY. (4 cr; prereq knowledge of French or German or Spanish or #) Sousa, staff

Problems involved in the designation of literary genres: modes of constitution, relation to periodization, possible relationships to extra-literary factors, question of status of genre marker.

5555. INTRODUCTION TO SEMIOTICS. (4 cr)

Armstrong, staff
Problems of the nature of the sign; sign function; sign production; text; culture; complex sign systems. Application of semiotics to various signifying practices (literature, film, images, television, cities).

5701. THE CONCEPT OF MODERNITY. (4 cr; prereq reading knowledge of German, French, Spanish or #) Canning

Concept of modernity as it unfolds in 19th century in works of Poe, Baudelaire, Nietzsche, Dostoevsky, and others and as reflected by contemporary theorists of language and literature.

5711. SOCIOCITICISM. (4 cr; prereq 3xxx literature course or #) Jha, staff

Sociological theories of discourse, including Bakhtin, Goldmann, and Foucault, and apply theory to practice in readings of specific texts.

5910. TOPICS IN COMPARATIVE LITERATURE.

(3-6 cr per qtr; prereq reading knowledge of French or German or Spanish or #) Staff
Topics specified in the *Class Schedule*.

5970. DIRECTED READING IN COMPARATIVE LITERATURE. (1-4 cr per qtr; prereq #) Staff

Guided individual reading or study.

Composition

See English.

Computer Science (CSci)

Institute of Technology

Staff—Head, to be announced, 4-192 EE/CS Bldg; **Associate Head**, Marvin Stein, 4-192 EE/CS Bldg; **Director of Undergraduate Studies**, John Carlis, 5-225C EE/CS Bldg; **Director of Graduate Studies**, Wei-tek Tsai, 4-196C EE/CS Bldg

Professors: D. Du, Fox, Petzold, Rosen, Saad, Shragowitz, Slagle, Stein

Major Requirements and Course Descriptions

Associate Professors: Boley, Carlis, D-Z. Du, Frankowski, Gini, Kumar, Norberg, Pong, Tripathi, Tsai

Assistant Professors: Barry, Choi, Chronopoulos, Janardan, Li, Park, Riedl, Shekhar, Srivastava

Computer science deals with the study of the hardware and software (programming) aspects of high-speed computing devices and with the application of these devices to technological and business problems. A bachelor's degree in computer science can be obtained in either CLA or IT (the IT program is described in the *Institute of Technology Bulletin*). Both curricula are designed to give students a basic understanding in the subjects of computer science.

You can concentrate in specialized areas of computer science or in interdisciplinary areas involving computer applications, preparing you for a variety of industrial, governmental, and business positions involving computer usage, as well as providing the background necessary for pursuing graduate work.

Admission—If you are interested in the B.A. degree in computer science, you must apply to the Department of Computer Science for admission as a major. GPA of at least 2.30 in Math, CSci, and Stats courses. Students may apply after completing the first year of calculus and CSci 3316. Application forms are available in 4-192 EE/CS Building. Transfer students should complete at least two technical courses at the University with a minimum modified GPA of 2.30 before applying for admission; at least one of these courses must be a computer science course.

B.A. Major Sequence

Required Preparatory Courses—Math 1251-1252, 1246 and Math 1311, 1321, 1331; or Math 1251, 1252, 1253, or equiv; Math 3251, 3261; Stat 3091 or 5121

Major Requirements—CSci 3311, 3316, 3317, 3321, 3322, 3327, 5102, 5106, 5201, 5301, 5400

At least 12 cr in 5xxx computer science courses not listed above

All courses listed above must be taken A-F (except courses offered S-N only).

A grade of at least C is required to satisfy prerequisite and degree requirements.

Minor Sequence

Required Preparatory Courses—Math 1211 or Math 1311 or Math 1611

Minor Requirements—21 cr from any CSci courses.

3001. PERSPECTIVES ON COMPUTERS AND SOCIETY. (4 cr, §NSci 3201; prereq soph or #; informal lab)

Impact of computers on society. Partnership or confrontation. History of development. Potential for use. Computer utility. Benefits and potential problems. Chip technology and CAD. Software development and maintenance. Computer networks. Impact of personal computers and supercomputers. Use and misuse of computers. Computer graphics. Artificial intelligence. Computer-based education. Applications in the office, business, and industry.

3101. INTRODUCTION TO COMPUTER APPLICATIONS FOR SCIENTISTS AND ENGINEERS.

(4 cr; prereq noncomputer science major, Math 1111 or 1201 or equiv or #; informal lab)

Algorithm development and principles of computer programming using FORTRAN, emphasizing numerical methods for science and engineering applications. Integral open laboratory.

3102. INTRODUCTION TO PASCAL PROGRAMMING. (4 cr; prereq noncomputer science major, Math 1111 or 1201 or equiv or #; informal lab)

Pascal computer language, applications, programming techniques. Designed to bring students to advanced-level competence in Pascal programming. Integral open laboratory.

3113. INTRODUCTION TO PROGRAMMING IN C. (4 cr; prereq CSci 3101 or 3102 or any programming experience, precalculus or #)

Intensive introduction to syntax and semantics of C language, with introduction to UNIX tools for implementing C programs. Students write programs, use debugging aids, and build libraries.

3121. SURVEY OF DATA STRUCTURES AND ALGORITHMS. (4 cr, §3105 or 3321; prereq 3102 or 3113 or #)

Fundamental structures of computer science, including induction, mathematical analysis of computational complexity, and the definition and implementation of selected data structures along with their fundamental operations. Students implement some of these data structures in computer programs.

3204H. INTRODUCTION TO PROGRAMMING AND PROBLEM SOLVING IN SCIENCE AND ENGINEERING I. (2 cr; prereq Honors Calculus I, IT honors program)

Problem solving and algorithms. Computer use in text editing, spreadsheets, use of menus, etc. Introduction to Pascal: sequence and I/O, decision and iteration. Programming with integers and characters. Iteration and recursion. Systematic loop design, loop invariants, introduction to loop design theory. Concept of array. Programming with real numbers. Input and computational errors. Use of Pascal library.

3205H. INTRODUCTION TO PROGRAMMING AND PROBLEM SOLVING IN SCIENCE AND ENGINEERING II. (2 cr; prereq Honors Calculus II, IT honors program)

Concept of library and its uses, "Black Box" approach to problem solving. Examples from root finding of nonlinear equations, and ordinary differential equations in solution to engineering problems. Modularization of larger programs, user defined subprograms. Communication between subprograms through variable scoping and parameters. Short introduction to FORTRAN modularization and connection with Pascal programs. Structured data types: multidimensional arrays, records, sets. Complex numbers and applications.

3311. DISCRETE STRUCTURES OF COMPUTER SCIENCE. (4 cr, §3400; prereq 1 qtr calculus or #) Mathematical techniques and structures needed in computer science. Topics include formal logic, elementary combinatorics, induction, recurrences, relations, and graphs.

3316. STRUCTURE OF COMPUTER PROGRAMMING I. (4 cr, §3106; prereq 1 qtr calculus or #) Different programming paradigms as a formal way of expressing computer algorithms and data. Procedures, recursion, and iteration as algorithmic development techniques. Use of abstraction and modularity. Language Scheme illustrates ideas and lab problems.

3317. STRUCTURE OF COMPUTER PROGRAMMING II. (4 cr; prereq 3316) Advanced programming paradigms. Object-oriented programming, logic programming, and pattern matching, examples. Generic operators, local variables, and objects as ways of encapsulating conceptual parts of a program. Language Scheme illustrates ideas and lab problems.

3321. ALGORITHMS AND DATA STRUCTURES I. (4 cr, §3105, §3121; prereq 3311, 3316 or #) Fundamental data structures. Rudimentary computer algorithms. Implement data structures and their operations as abstract data types. Study of C++ with emphasis on implementing data types and control structures.

3322. ALGORITHMS AND DATA STRUCTURES II. (4 cr, §5121; prereq 3321) Fundamental paradigms for algorithm design with supporting data structures. Complexity, correctness analysis, and lower bound theory. Implement selected algorithms and data structures using C++ language.

3327. INTRODUCTION TO THE ORGANIZATION OF COMPUTER SYSTEMS. (4 cr, §3107, §5101; prereq 3316 or 3121 or #) Organization of hardware and software systems that support computer programming and program execution. Symbolic assembly language to study mapping of application programs and data into underlying hardware. Ideas illustrated in assembly language programs (currently Motorola 68000).

5001. THEORY AND APPLICATION OF LINEAR PROGRAMMING ALGORITHMS. (4 cr; prereq 5301 or #; informal lab) Basic solutions to linear systems; inequalities; convex polyhedral sets; linear programming formulation and optimality conditions; theoretical and computational aspects of simplex algorithm; postoptimal analysis, duality. Revised simplex and numerically stable methods, upper bounded problems, commercially available LP systems; methods for large, sparse systems.

5002. COMPUTATIONAL METHODS FOR NON-LINEAR PROGRAMMING. (4 cr; prereq 5001 or #; informal lab) Convex functions and domains; nonlinear optimal conditions and duality; unconstrained minimization methods; convergence rates; minimization methods for linear and nonlinear constraints; penalty functions; acceleration of convergence; nonconvex problems.

5101. INTRODUCTION TO THE ORGANIZATION OF COMPUTER SYSTEMS. (4 cr; prereq 3121 or 3316, noncomputer science major or #; majors should take 3327) For description, see 3327.

5102. STRUCTURE AND PROGRAMMING OF SOFTWARE SYSTEMS II. (4 cr; prereq 3327 or 5101 or #) Extension of basic machine architecture and the principles of system programming; closed subroutines; parameter passing mechanisms; macros and conditional assembly; input-output; assembly linking and loading; dynamic resource allocation: introduction to operating systems, job control language, and processes.

Major Requirements and Course Descriptions

5104. SYSTEM SIMULATION: LANGUAGES AND TECHNIQUES. (4 cr; prereq 3327 or 5101, Stat 3091 or #; informal lab)

Methodologies relevant to system modeling and simulation. Application of stochastic processes, Markov chains, and queueing theory to developing system models and simulation experiments. Data collection and statistical analysis of output. Fundamentals of discrete event-based simulations using digital computers. Discussion of simulation languages, including SIMULA and SIMPAS. Application to job shops, operations research, and modeling of computer and communications systems.

5106. STRUCTURE OF HIGHER LEVEL LANGUAGES. (4 cr; prereq 5102, 5121 or #)

Definition of the syntax and semantics of programming languages; semantics both by means of interpreters and by using the axiomatic approach. Concepts underlying programming languages and their implementations in a selected group of languages. Program description at compilation time and execution time.

5107. COMPUTER GRAPHICS I. (4 cr; prereq 3327 or 5101, 3322 or #)

Definition of interactive computer graphics, its goals and problems. A model system. Data structures for computer graphics, picture structure, and transformations. Perspective views of 3-D objects. Structures of graphical programming languages. Interaction handling. Raster graphics.

5117. COMPUTER GRAPHICS II. (4 cr; prereq 5107 or #)

Vector geometry. Three-dimensional modeling and viewing transformations. Perspective view generation and 3-D clipping. Curves and surfaces. Hidden line and hidden surface removal. Realistic image generation. Advance display system architectures. Modeling of 3-D graphics programming.

5121. INTRODUCTION TO DATA STRUCTURES. (4 cr, §3322; prereq 3321; noncomputer science major only)

For description, see 3322.

5122. ADVANCED DATA STRUCTURES. (4 cr; prereq 3322 or 5121 or #; informal lab)

Internal and external sorting. Symbol tables. Optimal binary trees. AVL trees. Hashing. B-trees, trees. Files and indexes. ISAM, multilists, inverted files, cellular partitions, differential files.

5151-5152. INTRODUCTION TO PARALLEL COMPUTING I AND II. (4 cr; prereq 3121 or 3322)

Parallel computing. Programming techniques, algorithms, data structures. Evaluation of algorithm quality. Effectiveness and scalability. 5151: Basic concepts and algorithms for parallel computation. 5152: parallel algorithms for various problems.

5180. SOFTWARE ENGINEERING I. (4 cr; prereq 5106; informal lab)

Abstractions as a vehicle for analysis, design and testing, modules as a vehicle for implementation. Software life cycle and project databases PSL/PSA. Actor model of computation, process, and data modeling. The specification language MSG. Use of abstractions in functional design, architectural design, module design. Test case selection and reliability assessment. Systematic coding: invariants and representation functions.

5181. SOFTWARE ENGINEERING II. (5 cr; prereq 5180; scheduled lab)

Requirement analysis. Project planning and management. Design reviews, software testing, validation strategies. Maintenance. Lab with group projects, 12 hours per week project work outside of class time. Selected projects cover systems development, from requirements analysis through maintenance. Student groups specify, design, implement, and test partial software systems. Emphasis on application of general software development methods and principles from 5180, rather than on specific systems.

5199. PROBLEMS IN LANGUAGES AND SYSTEMS. (1-4 cr [may be repeated for cr]; prereq #)

Special courses or individual study arranged with a faculty member.

5201. INTRODUCTION TO COMPUTER ARCHITECTURE. (4 cr; prereq 3311, 3327 or 5101 or #)

Elementary computer architecture, gates, and digital logic; register transfers, micro operations; studies of existing systems.

5205. PARALLEL COMPUTER ARCHITECTURE. (4 cr; prereq 5201 or #)

Parallel computer system analysis and design. Organizational dependence on computations to be performed. Primary components of parallel architectures (processors, control units, memories, interconnection networks). Implemented paradigms of pipelines and vector processors, array processors, and multi-processors.

5211. DATA COMMUNICATIONS AND COMPUTER NETWORKS. (4 cr; prereq 5102 or #; informal lab)

Network classification and services. Hardware components: multiplexors, concentrators, communications media. Network protocols and architectures. Research areas.

5280. COMPUTER-AIDED DESIGN. (4 cr; prereq exper with data structuring; informal lab)

CAD for digital systems with emphasis on VLSI. Hardware description languages: synthesis, simulation, text generation.

5281. COMPUTER-AIDED DESIGN OF VLSI.

(4 cr; prereq exper with data structuring; informal lab)
CAD for digital systems with emphasis on VLSI. Physical design: partitioning, placement and routing, design rule checks, electrical rule checks, inherent complexity of algorithms. Analysis of best-known algorithms.

5299. PROBLEMS IN MACHINE DESIGN. (1-4 cr [may be repeated for cr]; prereq #)

Special courses or individual study arranged with faculty member.

5301. NUMERICAL COMPUTATION. (4 cr; prereq Math 3321 or equiv or #; knowledge of Pascal or FORTRAN assumed; informal lab)

Floating point arithmetic and rounding errors. Iterative methods. Numerical solution of nonlinear equations. Newton's method. Direct methods for linear systems of equations. Gaussian elimination. Factorization methods. Interpolation and approximation. Numerical integration and differentiation. Numerical solution of ordinary differential equations.

5302. ANALYSIS OF NUMERICAL ALGORITHMS. (4 cr; prereq 5301 or #; informal lab)

Norms, condition numbers, and error analysis. Convergence rates for iterative methods. Numerical approximation methods. Least squares. Fast Fourier transform. Gaussian quadrature. Spline interpolation. Computation of eigenvalues and eigenvectors. Stability and error analysis of methods for solution of ordinary differential equations.

5304. COMPUTATIONAL ASPECTS OF MATRIX THEORY. (4 cr; prereq 5302 or #; informal lab)

Direct and iterative solution of large linear systems. Decomposition methods. Computation of eigenvalues and eigenvectors. Singular value decomposition. Linpack and other software packages. Methods for sparse and large structured matrices.

5305. NUMERICAL METHODS FOR ORDINARY DIFFERENTIAL EQUATIONS. (4 cr; prereq 5302 or #; informal lab)

Initial value problem. Convergence and stability. Efficient implementation. Error estimation and step size control. Comparison of recent software packages. Two-point boundary value problems. Collocation and finite element methods.

5306. NUMERICAL METHODS FOR PARTIAL DIFFERENTIAL EQUATIONS. (4 cr; prereq 5302, differential equations or advanced calculus or #)

Fundamentals of partial differential equations (PDEs). Finite difference and finite element discretization methods. Numerical treatment of parabolic, hyperbolic, and elliptic problems. Convergence, stability, and consistency. Iterative methods. Programming techniques and use of FORTRAN packages.

5307. NUMERICAL ALGORITHMS FOR PARALLEL COMPUTERS. (4 cr; prereq 5301, 5302 or #)

Basic concepts of vectorization and parallelization. Parallel matrix multiplication. Parallel factorization for dense linear systems (LU, QR). Parallel solutions of triangular and banded systems. Parallel methods for the eigenvalue program. Parallel methods for sparse linear problems.

5314. INTRODUCTION TO SPARSE MATRIX TECHNIQUES. (4 cr; prereq 5304, programming exper equiv to 3105 or 3121 or 3321)

Sparse matrices: too big to fit in memory. Sources of sparse matrices. Reducing profile: reverse Cuthill McKee, general methods, elimination trees, fill-in. Reducing fill: minimum degree, nested dissection. Pivoting strategies and storage schemes. Iterative methods: matrix splitting, Jacobi, relaxation, preconditioning.

5399. PROBLEMS IN NUMERICAL ANALYSIS.

(1-4 cr [may be repeated for cr]; prereq #)

Special courses or individual study arranged with faculty member.

5400. INTRODUCTION TO AUTOMATA THEORY.

(4 cr; prereq 3311, 3321 or #)

Turing machines, computable functions, unsolvability of the halting problem. Recursive functions. Finite state models; equivalence, minimization, properties, decision questions, characterizations. Regular expressions. Survey of other automata.

5499. PROBLEMS IN COMPUTATIONAL THEORY OR LOGIC. (1-4 cr [may be repeated for cr];

prereq #)

Special courses or individual study arranged with faculty member.

5502. INTRODUCTION TO OPERATING SYSTEMS. (4 cr; prereq 5102, 3322 or 5121 or #; informal lab)

Definition and historical development of operating systems. Abstractions and implementations of features common to most systems. Concurrency and related control problems. Resource allocation. Storage allocation. The process manager and the kernel of an operating system. Sharing. Capability-based addressing. Protection. Performance measurement and analysis.

5504. INTRODUCTION TO COMPILERS. (4 cr; prereq 5106 or #; informal lab)

Lexical scanning, together with preprocessing and macro expansion, symbol tables, parsing, intermediate text generation, semantic processing, error detection and correction. Students design and implement a front end for a PL/5 compiler.

5505. INTRODUCTION TO COMPILERS. (4 cr; prereq 5504 or #)

A higher-level language L, machine loaders, linkage editors; mapping L onto machine language, code generation techniques; derivation of intermediate language and implementation of code generators. Students write back-end of a compiler.

5511. ARTIFICIAL INTELLIGENCE I. (4 cr; prereq 3322 or 5121 or #; informal lab)

The ideas and issues of artificial intelligence. Knowledge representation, problem solving, search, inference techniques, theorem proving. Expert systems. Applications of artificial intelligence. Artificial intelligence programming languages.

Major Requirements and Course Descriptions

5512. ARTIFICIAL INTELLIGENCE II. (4 cr; prereq 5511 or #; informal lab)

Techniques of artificial intelligence to solve complex problems. Natural language processing and speech recognition. Machine perception and integrated robots. Planning. Machine learning. Expert systems.

5521. PATTERN RECOGNITION. (4 cr; prereq 5301, Stat 3091 or #; informal lab)

Definition of the problems of pattern recognition, feature selection, measurement techniques, and similar problems. Classification methods: statistical decision theory, nonstatistical techniques. Automatic feature selection. Syntactic pattern recognition. Relationship between mathematical pattern recognition and artificial intelligence. Applications.

5531. ARTIFICIAL INTELLIGENCE PROGRAMMING TECHNIQUES. (4 cr; prereq 5511 or #; informal lab)

Languages and programming techniques for problems in artificial intelligence. Lisp and Prolog. Production system and frame-based languages. High-level tools. Implementation of knowledge representation structures and inference operations. Applications in expert systems.

5561. COMPUTER VISION. (4 cr; prereq 5511 or #)

Introduction to computer vision. Representational and computational tools. Matching. Edge direction. Shape from shading, motion, stereo.

5571. EXPERT SYSTEMS. (4 cr; prereq 5511 or #)

Introduction to expert systems. Aspects of artificial intelligence representations and inferencing mechanisms.

5599. PROBLEMS: ARTIFICIAL INTELLIGENCE. (1-4 cr per qtr; prereq #)

Special courses or individual study arranged with faculty member.

5702. THE PRINCIPLES OF DATABASE SYSTEMS. (4 cr; prereq 5122 or #; informal lab)

Fundamental concepts. Conceptual data organization. Data models. Data manipulation languages. Database design. Security and integrity. Performance evaluation. Query optimization. Distributed database systems.

5703. DATA BASE SYSTEM DESIGN. (4 cr; prereq 5702, #; informal lab)

Designing and developing of database systems and database applications. Designing of current commercial and research-oriented database systems. Techniques of using database systems for applications.

5799. PROBLEMS IN INFORMATION SCIENCE. (1-4 cr per qtr; prereq #)

Special course or individual study arranged with faculty member.

Cultural Studies and Comparative Literature

See Comparative Literature and Humanities sections.

Dance

See Theatre Arts and Dance.

Danish

See Scandinavian Languages and Literature.

Dutch

See German.

East Asian Studies

See Areas Studies Programs.

Ecology, Evolution, and Behavior (EEB)

College of Biological Sciences

Staff—Head, Franklin H. Barnwell, 102 Ecology Building; **Director of Undergraduate Studies,** John R. Tester

Regents' Professors: Davis, Gorham

Professors: Abrams, Barnwell, Birney, Corbin, Curtsinger, Cushing, McKinney, McNaught, Megard, Morrow, Phillips, Regal, Schmid, Shapiro, Siniff, Starfield, Tester, Tilman, Underhill

Associate Professors: Alstad, Beatty, Bright, Packer, Pusey

Adjunct Faculty—Professors: Heinselman (retired forest ecologist), Mech (U.S. Fishery and Wildlife Service)

Associate Professor: Murdock (Bell Museum)

Assistant Professor: Pastor (Natural Resources Research Institute, Duluth)

Ecologists study how plants and animals adapt to the environment. The ecological perspective encompasses the growth and maintenance of populations and their interactions in communities, and the interrelationships among organisms and physical events in terrestrial and aquatic ecosystems. The behavioral biology perspective deals with adaptations to the environment, mechanisms of behavior, and evolution of social systems.

Courses listed here frequently are taken by students seeking a B.A. degree in biology through CLA.

General Education—Courses especially appropriate for nonmajors include Biol 1008, 1106 and EEB 3001, 3111.

Biol 1106. GENERAL ZOOLOGY. (5 cr; prereq Biol 1009)

Survey of animal phyla; structure, function, behavior, adaptation, and evolutionary relationships.

Biol 5041. ECOLOGY. (4 cr, §5841; prereq Math 1142 or 1251, Biol 1103 or 1106 or 3011 or 3012)

Growth, structure, and evolution of populations. Pair-wise biotic interactions between species and their effect on the diversity and structure of natural communities. Nutrient dynamics, function, productivity, and temporal stability of ecosystems.

Introductory Ecology and Behavioral Biology

1019. OUR CHANGING PLANET. (4 cr, §Ast 1019, §Geo 1019)

Interrelationships among Earth's subsystems—solid earth, oceans, atmosphere and biosphere, and solar and galactic super-systems. Interactions of natural cycles, their rates. Feedback and human impact.

3001. INTRODUCTION TO ECOLOGY. (4 cr; open to jrs and above but not to biology majors)

Basic concepts in ecology; the organization, development, and functioning of ecosystems; population growth and regulation. Human impact on ecosystems.

3101. ECOLOGY FOR ENGINEERS AND PHYSICAL SCIENTISTS. (4 cr, §3001; prereq Math 1261; not open to biology majors)

Spatial and temporal interactions between populations in ecosystems; processes affecting populations; transformations of energy and materials in the biosphere. Lectures and recitations.

3111. INTRODUCTION TO ANIMAL BEHAVIOR. (4 cr, §AnSc 3111; prereq Biol 1008 or 1009 or #)

Biological study of animal behavior including questions of causation, development, function, and evolution; emphasizes evolution of adaptive behavior, especially social behavior, in the natural environment.

3960. RESEARCH TOPICS IN ECOLOGY AND BEHAVIORAL BIOLOGY. (1 cr per qtr; prereq #; S-N only)

Lectures on and discussion of current research in the department.

5004. DYNAMICS OF GLOBAL CHANGE: QUATERNARY HISTORY OF ECOSYSTEM RESPONSE. (4 cr; prereq 12-15 cr biology or geology or #)

Events before and during the Quaternary Ice Age illustrating connections among Earth's biota, atmosphere, continents, and oceans that result in a dynamic global ecosystem.

5970. DIRECTED STUDIES. (Cr ar; prereq #, Δ)

Individual study on selected topics or problems, with emphasis on selected readings and use of scientific literature.

5990. DIRECTED RESEARCH. (Cr ar; prereq #, Δ)

Laboratory or field investigation of selected areas of research.

Community Ecology and Paleoecology

5008. QUATERNARY ECOLOGY. (4 cr; prereq Biol 5041 or 5841 or #)

Impact of changes in the physical and biological environment during the Quaternary Period on plants and animals; changes in evolutionary rates, geographical distributions, community composition, and fluctuations in population sizes. Impact of prehistoric human culture on the environment, including ecosystem-level changes recorded in sedimentary sequences. Recent climatic changes. General principles of analysis and methods of investigation and interpretation.

5014. ECOLOGY OF PLANT COMMUNITIES.

(5 cr; prereq Biol 5041 or 5841, 1 qtr statistics or #) Methods of describing, sampling, and classifying plant communities; theory of their structure, development, and of the stability of the interactions among their constituent populations. Field trips to examine local vegetation types; analysis of quantitative data.

5016. ECOLOGICAL PLANT GEOGRAPHY. (5 cr; prereq Biol 5041 or 5841, PBio 3201 or 1PBio 3201 or #; offered when feasible)

Vegetation regions of the world in general and North America in detail; ecological principles of plant distribution; interpretation of regional and temporal patterns in the distribution of vegetation and taxonomic groups. Field trips to floristic regions of Minnesota.

Population and Evolutionary Biology

5044. EVOLUTION. (4 cr; prereq Biol 1106 or 3011 or 1103 or 3012)

Evidence for and causes of biological evolution.

5051. ANALYSIS OF POPULATIONS. (4 cr; prereq Biol 5041 or 5841 or #; offered when feasible)

Factors involved in the regulation, growth, and general dynamics of populations. Data needed to describe populations, population growth, population models, and regulatory mechanisms.

Major Requirements and Course Descriptions

5052. THEORETICAL POPULATION ECOLOGY. (4 cr; prereq Biol 5041 or 5841 or #; offered when feasible)

Theories of population ecology, including models of growth and regulation of single populations, and of interactions between populations, including competition, predation, mutualism, emphasizing assumptions and rationales of models and their predictions for dynamics, stability, and diversity of communities.

5063. EVOLUTIONARY ECOLOGY OF INSECT POPULATIONS. (3 cr; prereq Biol 5041 or 5841 or #; offered when feasible)

Dynamics and regulation of insect populations; life history evolution; cytogenetic patterns; reproductive competition, mating systems, and modes of speciation; mechanisms and implications of frequency dependent coevolution.

5065. THEORETICAL EVOLUTIONARY ECOLOGY. (3 cr; prereq Math 1261, one 5xxx-level course in ecology or evolution or behavior or #; offered when feasible)

Evolutionary approaches to ecology and behavior based upon application of optimizations and game theory techniques. Topics include optimal foraging theory, evolution of life histories, animal behavior in contest situations.

Organismal Biology and Physiological Ecology

5122. PLANT/ANIMAL INTERACTIONS. (4 cr; prereq Biol 1106 or 3011, 1103 or 3012, 10 cr in biological sciences or #; offered when feasible)

Herbivory, pollination, seed dispersal. Implications of interaction for plants and animals at organismal, population, and community levels. Coevolution.

5129. MAMMALOLOGY. (5 cr, §FW 5129; prereq Biol 1106 or 3011 or #)

Recent families and orders of mammals of the world and genera and species of mammals of North America, with emphasis on morphology, evolution, and zoogeographic history.

5134. INTRODUCTION TO ORNITHOLOGY. (5 cr; prereq Biol 1106 or 3011)

Laboratory and field course in structure, classification, distribution, migration, habits, habitats, and identification of birds. Weekend trips scheduled.

5136. ICHTHYOLOGY. (4 cr; prereq 15 cr including Biol 1106 or 3011)

Biology of fishes including development, systematics, anatomy, physiology, and ecology.

5156. COMPARATIVE ANIMAL PHYSIOLOGY. (5 cr; prereq Biol 1106 or 3011, Chem 3302 or #)

The environment imposes passive stresses upon organisms—not equilibrium. Various physiological adaptations allow maintenance of homeostasis. The passive organism: environmental “stresses” and biological mechanisms by which they are counteracted.

Behavior

5321. EVOLUTION OF SOCIAL BEHAVIOR. (4 cr; prereq Biol 1106 or 3011 or #; offered when feasible) Introduction to current theories and concepts relating to mating systems, spacing systems, and cooperative behavior in animals.

5325. BEHAVIORAL ECOLOGY. (4 cr; prereq 3111 or 5321 or Biol 5041 or 5841 or #; offered when feasible)

Evolutionary principles applied to the study of aggressive competition, mating systems, cooperation, and parental investment. Optimization models used to examine foraging strategies, predator/prey interactions, and territoriality. Evolution of sex, sexual selection, and dispersal.

Limnology and Ecosystem Ecology

5601. LIMNOLOGY. (4 cr, §Geo 5601; prereq Chem 1052 or #)

Description and analysis of the events in lakes, reservoirs, and ponds, beginning with their origins and progressing through their physics, chemistry, and biology. Interrelationships of these parameters and effects of civilization on lakes.

5606. ECOLOGY OF FISHES. (3 cr; prereq Biol 1106 or 3011, EEB 5136, 10 cr biological sciences; offered when feasible)

Ecological requirements of fishes, with emphasis on nongame species: habitat, food, interactions among species, and behavioral, anatomical, and physiological adaptations. Fishes in the aquatic ecosystem, with emphasis on fresh waters.

5607. ECOLOGY OF ANIMAL PLANKTON. (5 cr; prereq Biol 5041 or 5841, EEB 5601 or #; offered when feasible)

Biology of animal plankton, including distribution of zooplankton in lakes, ecosystem functions such as grazing and remineralization, determination of production, physiological responses to contaminated environments, and important aspects of behavior.

5608. ECOSYSTEMS: FORM AND FUNCTION. (4 cr; prereq 5601 or Biol 5041 or 5841 or equiv)

Nature and development of terrestrial, wetland, and aquatic ecosystems. Analysis of energy flow and element cycling in relation to environmental controls, self-regulation, natural and human disturbances.

5621. LIMNOLOGY LABORATORY. (2 cr, §Geo 5621; prereq EEB 5601 or Geol 5601 or #; offered when feasible)

Techniques for obtaining information about environmental conditions in lakes and streams. Procedures for measuring the abundance and population dynamics of aquatic organisms, with special emphasis on plankton. Field instruments, sampling devices, chemical analysis, microscopy, and analysis of data. One Saturday field trip.

Courses Offered at Lake Itasca Forestry and Biological Station

5817. VERTEBRATE ECOLOGY. (5 cr; prereq course in ecology, Δ)

Field studies on vertebrate populations and their relationships to local environments; habitat analysis and ecological research methods. Students work individually and as teams investigating factors influencing distribution and abundance of selected vertebrates in various habitats. Lectures and field trips.

5834. FIELD ORNITHOLOGY. (5 cr; prereq course in general biology including study of zoology, Δ) Emphasis on breeding season, biology, and behavioral ecology of birds in the Itasca Park region. Field trips to a variety of habitats to learn bird identification and to observe and practice techniques for conducting field studies. Lab sessions investigate family distinctions and species identification. Individual field projects.

Biol 5841. ECOLOGY. (5 cr, §Biol 5041; prereq 1103 or 3012 or 1106 or 3011, Math 1142 or 1251, Δ) Growth, structure, and evolution of populations. Pairwise biotic interactions between species and their effect on diversity and structure of natural communities. Nutrient dynamics, function, productivity, and temporal stability of ecosystems. Field work at Itasca station.

Economics (Econ)

Staff—Chair, Craig Swan, 1035 Management and Economics Building; **Director of Undergraduate Programs,** Simran Sahi, 1035 Management and Economics Building; Allen, Altug, Chipman, Coen, Feldman, Foster, Geweke, Green, Hurwicz, Ichimura, Jordan, Keane, P. Kehoe, T. Kehoe, Kiyotaki, Marimon, McLennan, Merlo, Moring, Prescott, Richter, Rogerson, Ruttan, Sahi, Smith, Swan, Thompson, Wallace, Werner

Economics seeks to describe how the economy works, to define criteria for assessing its efficiency in providing goods and services, and to evaluate alternative techniques of social control intended to increase economic efficiency and equity. A major in economics will be useful if you are contemplating a career in business, law, government, or teaching. For professional work as an economist in government, and for college teaching, graduate work is desirable.

Prospective public school teachers should consult the *College of Education Bulletin*.

Because of their difficulty, instructor consent is required for admission to the following courses: 5151-5152, 5161-5162-5163, 5164-5165-5166, and 5261-5262-5263.

General Education—All courses are open to nonmajors, but those with minimal prerequisites may be of special interest.

Classes that require no prior coursework in economics are 1101, 1101H, and 1104.

Those that require only 1101 and 1102 as prerequisites are 3315, 3501, 3601, 3701, 3801, 3970, 5301, 5307, 5401, 5534, and 5623.

Recommended Enrichment—The economics department encourages its majors and minors to take advantage of educational opportunities such as internships, undergraduate research, honors courses, and foreign study. Students are invited to incorporate study abroad into their major program and will receive appropriate credit on review of courses taken. For further information, see also Foreign Study.

B.A. and B.S. Majors—The Department of Economics offers four major sequences, two for the B.A. degree and two for the B.S.

The B.S. degree is more quantitative in orientation than the B.A. The specialized tracks (B.A. Quantitative Emphasis major program and B.S. Mathematics Emphasis major program) stress particular supporting quantitative skills (calculus, linear algebra, and econometrics), while the two general tracks (B.A. and B.S. major programs) do not require such specific quantitative courses. The senior adviser for majors and premajors is the Director of Undergraduate Programs.

B.A. Major Sequence

The B.A. major program is intended to give the student a solid background in economics without assuming that he or she will pursue a career or graduate training in economics. The B.A. major program is the least quantitative of the four major options and offers considerable freedom in course selection from among many upper division electives.

Major Requirements and Course Descriptions

Required Preparatory Courses—1101 or 1101H or 1104 or equiv; 1102 or 1102H or 1105 or equiv; Math 1142 or 1251 or equiv; Stat 1001 or equiv recommended

Major Requirements—*Part I:* Stat 3011-3012 (no credit for Stat 5021)

3101 or 3101H, 3102 or 3102H, 3103 or 3103H (3101 must be taken first; 3102 and 3103 may be taken simultaneously)

28 3xxx-5xxx cr; may include three courses from Acct 3101; AgEc 3040, 3070, 3500, 3710, any 3-or 4-cr AgEc 5xxx-level course; BFin 3000, 3300. Economics courses reserved for nonmajors do not count toward the 28 cr.

Part II: Composition requirement: Upper-level writing course, Comp 3014—Writing for the Quantitative Social Sciences or 3027—Advanced Expository Writing (highly recommended)

Senior project: major paper (obtain guidelines from the department)

Two courses in the major requirements section may be taken S-N.

GPA requirement: C or better in all courses in the major requirements section.

4 cr of directed studies courses (3970, 5970) may be applied toward the major.

Supporting coursework in computer science, mathematics, and statistics is recommended.

B.A. Quantitative Emphasis Major Sequence

The B.A. Quantitative Emphasis major program adds basic quantitative training (in calculus, linear algebra, and econometrics) to the student's economics program. This major should be especially attractive to students considering careers that require some practical economic analysis or who are considering graduate work in business administration or public affairs.

Required Preparatory Courses—1101 or 1101H or 1104 or equiv; 1102 or 1102H or 1105 or equiv; Math 1251-1252 or equiv

Major Requirements—*Part I:* Math 1261 or equiv

Stat 3011-3012 (no credit for Stat 5021)

3101 or 3101H, 3102 or 3102H, 3103 or 3103H (3101 must be taken first; 3102 and 3103 may be taken simultaneously); 3231

20 3xxx-5xxx cr; may include two courses from Acct 3101; AgEc 3040, 3070, 3500, 3710, any 3-or 4-cr AgEc 5xxx-level course; BFin 3000, 3300. Economics courses reserved for nonmajors do not count toward the 20 cr.

Part II: Same as *Part II* for B.A. major program.

Supporting coursework in computer science and statistics is recommended.

B.S. Major Sequence

The B.S. major program emphasizes a strong quantitative component but is not designed specifically for students who plan to pursue a career or graduate training in economics. (The major would be suitable for those interested in graduate work in business administration.) The student is given significant freedom in course selection from three quantitative fields (computer science, mathematics, and statistics) as well as from economics.

Required Preparatory Courses—1101 or 1101H or 1104 or equiv; 1102 or 1102H or 1105 or equiv; Math 1251-1252-1261 or equiv; a minimum GPA of 2.50 in economics and mathematics

Major Requirements—*Part I:* Stat 5121-5122 or 5131-5132-5133 (5131-5132-5133 are more difficult) (no credit for Stat 5021)

2 additional courses (at least 4 cr each) from the CSci department (at or above the 31xx level), Math department (any course at or above the 31xx level except Math 3142), or Stat department (any course at the 5xxx level except Stat 5021). Courses must be approved by the economics department.

3101 or 3101H, 3102 or 3102H, 3103 or 3103H (3101 must be taken first; 3102 and 3103 may be taken simultaneously)

Two courses from: 5xxx-level honors courses; 5113; 5231-5232; 5733-5734; and 5161-5162-5163, 5164-5165-5166, 5261-5262-5263. Courses in these last three sequences may be taken S-N.

Part II: 24 3xxx-5xxx cr; may include three courses selected from Acct 3101; AgEc 3040, 3070, 3500, 3710, any 3-or 4-cr AgEc 5xxx-level course; BFin 3000, 3300; Math 5081, 5242-5243, 5606-5607-5608. Economics courses reserved for non-majors do not count toward the 24 cr.

Composition requirement: Upper-level writing course, Comp 3014—Writing for the Quantitative Social Sciences or 3027—Advanced Expository Writing (highly recommended)

Two courses in the major requirements section may be taken S-N (in addition to 5161-2-3, 5164-5-6, or 5261-2-3).

GPA requirement: C or better in all courses in the major requirements section.

4 cr of directed studies courses (3970, 5970) may be applied toward the major.

B.S. Mathematics Emphasis Major Sequence

The B.S. Mathematics Emphasis major program is designed specifically for the student interested in graduate study of economics or a career as a professional economist in business, government, or college teaching. The major's strong quantitative component stresses particular quantitative skills such as multivariate calculus, linear algebra, and econometrics—essential in economics graduate training.

Required Preparatory Courses—1101 or 1101H or 1104 or equiv; 1102 or 1102H or 1105 or equiv; Math 1251-1252-1261 or equiv; Stat 3011 or equiv recommended; a minimum GPA of 2.50 in economics and mathematics

Major Requirements—*Part I:* Math 3251-3261

Stat 5121-5122 or 5131-5132-5133
3101 or 3101H, 3102 or 3102H, 3103 or 3103H (3101 must be taken first; 3102 and 3103 may be taken simultaneously); 5231

Two courses from: 5xxx-level honors courses; 5113; 5232; 5733-5734; and 5161-5162-5163, 5164-5165-5166, 5261-5262-5263. Courses in these last three sequences may be taken S-N.

Part II: Same as *Part II* for B.S. major program.

Supporting coursework in computer science is recommended.

Minor Sequence

For any of the following minor programs, no more than one course may be taken S-N; a grade of C or better is required in all courses in the minor requirements section.

General Economics

Required Preparatory Courses—1101 or 1101H or 1104; 1102 or 1102H or 1105; Math 1142 or 1251 or equiv

Minor Requirements—3101 or 3105 or equiv

16 additional 3xxx-5xxx cr (advance approval of courses by the economics department is needed)

Up to 4 cr of directed studies courses (3970, 5970) may be applied toward the minor.

Economic Theory

Required Preparatory Courses—1101 or 1101H or 1104 or equiv; 1102 or 1102H or 1105 or equiv; Math 1251-1252 or equiv

Minor Requirements—Math 1261-3251-3261 or equiv

3101, 3102, 3013 or equiv

2 courses from 5107H, 5113, 5733-5734

Econometrics

Required Preparatory Courses—1101 or 1101H or 1104 or equiv; 1102 or 1102H or 1105 or equiv; Math 1251-1252 or equiv

Minor Requirements—Math 1261 or equiv
Stat 5121-5122 or 5131-5132-5133

3101, 3102 or equiv

5231-5232

4 cr directed studies (5970) for an econometrics research project

International Trade and Development

Required Preparatory Courses—1101 or 1101H or 1104; 1102 or 1102H or 1105; Math 1142 or 1251 or equiv

Major Requirements and Course Descriptions

Minor Requirements—3101 or equiv

- 5331 (prereq 3102) or 5301
- 5337 (prereq 3102) or 5307
- 3315 or 5315
- 5431-5432 (prereq 3102, 3103) or 5401

Applied Microeconomics

Required Preparatory Courses—1101 or 1101H or 1104; 1102 or 1102H or 1105; Math 1251 or equiv

Minor Requirements—3101 or equiv

- 5531 (prereq 3102) or 3501
- 5631 (prereq 3103) or 3601
- 5611 or 5621 or 5623
- 5821 (prereq 3103) or 3801 or 5831 (prereq 3103)

Recommended: 3231, (prereq Stat 3011-3012 or equiv)

Monetary Economics

Required Preparatory Courses—1101 or 1101H or 1104; 1102 or 1102H or 1105; Math 1142 or 1251 or equiv

Minor Requirements—Stat 3011 or equiv

- 3101 or 3105, 3102 or equiv
- 3751-3752
- 5721 or 3701
- 5731 or 5741

General

1101f,w,s. PRINCIPLES OF MICROECONOMICS. (4 cr, §1002, §1005, §1104; prereq knowledge of plane geometry and intermediate algebra at the level of GC 0623 and GC 0631)

Demand and supply; competition and monopoly; the distribution of income.

1101Hf,w,s. HONORS COURSE: PRINCIPLES OF MICROECONOMICS. (5 cr, §1002, §1005, §1104; prereq knowledge of plane geometry and intermediate algebra at the level of GC 0623 and GC 0631)

1102f,w,s. PRINCIPLES OF MACROECONOMICS. (4-5 cr, §1001, §1004, §1105; prereq 1101 or equiv, knowledge of plane geometry and intermediate algebra at the level of GC 0623 and GC 0631; B avg recommended)

National income; money and banking; business cycles; international trade.

1102Hf,w,s. HONORS COURSE: PRINCIPLES OF MACROECONOMICS. (5 cr, §1001, §1004, §1105; prereq 1101 or equiv, knowledge of plane geometry and intermediate algebra at the level of GC 0623 and GC 0631; B avg recommended)

1104f,w,s. PRINCIPLES OF MICROECONOMICS. (4 cr, §1002, §1005, §1101; prereq 1 qtr calculus) For description, see 1101.

1105f,w,s. PRINCIPLES OF MACROECONOMICS. (4 cr, §1001, §1004, §1102; prereq 1104 or equiv, 1 qtr calculus) For description, see 1102.

Economic Theory

3101f,w,s. MICROECONOMIC THEORY. (4 cr, §3105; prereq 1101, 1102 or equiv, 1 qtr calculus) Behavior of households, firms, and industries under competitive and monopolistic conditions; factors influencing production, price, and advertising decisions.

3101H. HONORS COURSE: MICROECONOMIC THEORY. (5 cr; prereq 1101, 1102 or equiv, 1 qtr calculus; B avg recommended)

3102f,w,s. MACROECONOMIC THEORY. (4 cr; prereq 3101 or equiv) Determinants of national income, employment, and price level; aggregate consumption, investment, and government demand; the money market; the labor market.

3103f,w,s. WELFARE ECONOMICS. (4 cr; prereq 3101 or equiv) Economic efficiency and the conditions necessary to sustain it. Conflicts between efficiency and income distribution goals. How market structure and public policies increase or decrease efficiency.

3103H. HONORS COURSE: WELFARE ECONOMICS. (5 cr; prereq 3101 or equiv, 1 qtr calculus; B avg recommended)

3105. MANAGERIAL ECONOMICS. (4 cr, §3101, §BGS 3001; not open to economics majors; prereq 1101, 1102 or equiv, 1 qtr calculus) Theory of the firm; managerial decision problems. Demand theory. Production technology and cost concepts. Pricing and output decisions. Investment behavior.

5107H. HONORS COURSE: GAME THEORY AND ITS APPLICATIONS. (5 cr; prereq 3101, 3102, 3103 or equiv, Math 1251-1252-1261 or equiv) Introduction to games; normal form and extensive form; wars of attrition; games of timing; bargaining applications in industrial organization, macroeconomics, and international economics.

5113. INTRODUCTION TO MATHEMATICAL ECONOMICS. (4 cr; prereq 3101, 3102, 3103 or equiv, Math 1251-1252-1261-3251 or equiv)
Development in mathematical terms of selected models of economic behavior. Topics selected to illustrate the advantages of a mathematical formulation.

5151. ELEMENTS OF ECONOMIC ANALYSIS: FIRM AND HOUSEHOLD. (3 cr; prereq 3101 or equiv, 1 qtr calculus, 1 qtr linear algebra, grad or #)
Decision making by households and firms under conditions of competition, monopoly, and monopolistic competition.

5152. ELEMENTS OF ECONOMIC ANALYSIS: INCOME AND EMPLOYMENT. (3 cr; prereq 3101, 3102 or equiv, 1 qtr calculus, 1 qtr linear algebra, grad or #)
Determinants of national income, employment, and price level; aggregate consumption, investment, and asset holding.

5161-5162-5163. MICROECONOMIC THEORY. (5 cr per qtr [no grad cr]; prereq 3103, Math 3251-3252 or equiv, #; 5113 recommended)
Decision problems faced by the household and the firm; theories of choice under conditions of certainty and uncertainty. Partial equilibrium analysis of competition and monopoly. General equilibrium analysis. Welfare economics: economic efficiency of alternative market structures; social welfare functions. Dynamics: stability of markets; introduction to capital theory.

5164-5165-5166. MACROECONOMIC THEORY. (5 cr per qtr [no grad cr]; prereq 3102, 3103, Math 3251-3252 or equiv, #; 5113 recommended)
General equilibrium models for determining output, employment, price level, and rate of interest. Components of demand for goods (especially consumption and investment demand) and for financial assets. Models of economic fluctuations and growth.

Econometrics

3231. PRINCIPLES OF ECONOMETRICS. (4 cr, §5231; prereq 1101, 1102 or equiv, 1 qtr calculus, Stat 3011-3012 or equiv, familiarity with computers [MIS 1070 or equiv, ACSS short courses])
Data analysis and quantitative methods in economics; violation of classical regression model assumptions and consideration of modified estimation procedures that retain desirable properties; multi-equation models. Computer applications and interpretation of empirical results.

5231-5232. INTRODUCTION TO ECONOMETRICS. (4 cr per qtr; prereq 3101 or equiv, Stat 5121-5122 or 5131-5132-5133, Math 1251-1252-1261 or equiv or #)

Advanced econometric models, including systems of simultaneous equations, structural models of qualitative economic behavior, and intrinsically nonlinear models. Asymptotic and small sample properties of estimators. Applications of econometrics to household and firm behavior; forecasting and policy analysis with macroeconomic models.

5261f-5262w-5263s. APPLIED ECONOMETRICS. (5 cr per qtr [no grad cr]; prereq 3101, 3102, Stat 5122, 1 qtr linear algebra, #)
Conceptual basis of econometric theory (omitting many proofs of theorems); application to economic models. Laboratory.

Economic Development, Comparative Systems, Area Studies

3315. THE JAPANESE ECONOMY. (4 cr, §5315; prereq 1101, 1102 or equiv; not open to economics majors)
Economic development following contact with Western civilization. Current problems; population growth, capital formation, international economic relations.

5301. ECONOMIC DEVELOPMENT. (4 cr, §5331; prereq 1101, 1102 or equiv; not open to economics majors)
Economic growth in low income countries. Theory of aggregate and per capita income growth. Population growth, productivity increases, and capital formation. Allocation of resources between consumption and investment and among sectors. International assistance and trade.

5307. COMPARATIVE ECONOMIC SYSTEMS. (4 cr, §5337; prereq 1101, 1102 or equiv; not open to economics majors)
Functions of economic systems; market economy, liberal socialism, centrally planned economy. American and Soviet economies.

5312. TECHNOLOGY AND DEVELOPMENT. (4 cr; prereq 3101, 3102 or equiv or #)
Economics of research and development; technical change and productivity growth; impact of technology on institutions; science and technology policy.

5315. THE JAPANESE ECONOMY. (4 cr, §3315; prereq 3101 or equiv)
For description, see 3315.

5331. ECONOMIC DEVELOPMENT. (4 cr, §5301; prereq 3101, 3102 or equiv)
For description, see 5301.

5331H. HONORS COURSE: ECONOMIC DEVELOPMENT. (5 cr, §5301; prereq 3101, 3102, 3103 or equiv, 1 qtr calculus; B avg recommended)

Major Requirements and Course Descriptions

5337. COMPARATIVE ECONOMIC SYSTEMS.

(4 cr, §5307; prereq 3101, 3102 or equiv)

For description, see 5307.

International Economics

5401. INTERNATIONAL ECONOMICS. (4 cr, §5429, §5431, §5432; prereq 1101, 1102 or equiv; not open to economics majors)

Explanations of trade patterns. Commercial policy and international capital movements. Balancing international receipts and payments, the role of exchange rates, international monetary reform.

5431. INTERNATIONAL TRADE. (4 cr, §5401, §5429; prereq 3101, 3102, 3103 or equiv)

Explanations of trade patterns. Commercial policy and international capital movement.

5431H. HONORS COURSE: INTERNATIONAL TRADE. (5 cr, §5401, §5429; prereq 3101, 3102, 3103 or equiv, 1 qtr calculus; B avg recommended)

5432. INTERNATIONAL FINANCE. (4 cr, §5401; prereq 3101, 3102, 3103 or equiv; 5431 or equiv recommended)

Balancing international receipts and payments; the role of exchange rates; international monetary reform.

Labor Economics

3501. LABOR ECONOMICS. (4 cr, §5531; prereq 1101, 1102 or equiv; not open to economics majors)

Role of labor in economy: labor as a factor of production, population and the labor force; economics of labor markets; labor market institutions; theories of wages and employment; unions and collective bargaining; public policy.

5531. LABOR ECONOMICS. (4 cr, §3501; prereq 3101, 3102 or equiv)

For description, see 3501.

5534. ECONOMIC SECURITY. (4 cr, §Ins 3210; prereq 1101, 1102 or equiv)

Public and private approaches to economic insecurity problems. Economic and social implications of private and public programs. Emphasis on economics of income and employment stabilization rather than legal or administrative aspects.

Industrial Organization, Resource and Urban Economics

3601. INDUSTRIAL ORGANIZATION AND ANTI-TRUST POLICY. (4 cr, §5631; prereq 1101, 1102 or equiv; not open to economics majors)

Economic aspects of antitrust and related policies. Relations between market structure and economic efficiency and welfare. Economic origins of monopoly and other restraints on competition. Purposes and effects of antitrust and related legislation.

5611. RESOURCE AND ENVIRONMENTAL ECONOMICS. (4 cr; prereq 3101 or equiv, 1 qtr calculus)

Exhaustible resources and the theory of optimal depletion. Renewable resources and the theory of optimal use. Will resource scarcity limit growth? Natural resources and natural environments. Environmental pollution and economic efficiency.

5621. URBAN ECONOMICS. (4 cr; prereq 3101 or equiv)

The economics of urbanization. The location of economic activity and of cities. Central place theory. Site rents and the form of the city. The urban economic base and economic policy. Urban problems and economic policies: transportation, poverty and segregation, housing, public finance.

5623. HOUSING MARKETS AND PUBLIC POLICY. (4 cr; prereq 1101, 1102 or equiv)

Analysis of housing markets. Market failures, externalities and the case for government intervention. Relative efficiency of particular forms of intervention.

5631. INDUSTRIAL ORGANIZATION AND ANTI-TRUST POLICY. (4 cr, §3601; prereq 3101, 3103)

For description, see 3601.

5631H. HONORS COURSE: INDUSTRIAL ORGANIZATION AND ANTI-TRUST POLICY. (5 cr; prereq 3101, 3103 or equiv, 1 qtr calculus; B avg recommended)

Monetary Economics and Macroeconomic Policy

3701. MONEY AND BANKING. (4 cr, §5701, §5721; prereq 1101, 1102 or equiv; not open to economics majors)

Historical development, present characteristics, and economic role of financial institutions. Commercial banking, the Federal Reserve system, and monetary policy.

3751-3752. FINANCIAL ECONOMICS I AND II. (4 cr per qtr; prereq 3101 or 3105, 1 qtr statistics, 1 qtr calculus)

Financial decisions of firms and investors. Determination of interest rates and asset prices. The role of risk and uncertainty. Emphasis on economic models rather than the details of financial institutions.

5721. MONEY AND BANKING. (4 cr, §3701, §5701; prereq 3101, 3102 or equiv)

For description, see 3701.

5721H. HONORS COURSE: MONEY AND BANKING. (5 cr; prereq 3101, 3102 or equiv, 1 qtr calculus; B avg recommended)

5731. MACROECONOMIC POLICY. (4 cr; prereq 3101, 3102 or equiv)

Evaluation of policy alternatives. Rational expectations. Rules versus discretion. Control of inflation. Natural rate of unemployment. Targets and instruments.

5731H. HONORS COURSE: MACROECONOMIC POLICY. (5 cr; prereq 3101, 3102 or equiv, 1 qtr calculus; B avg recommended)

5733-5734. INTERTEMPORAL ECONOMICS AND MONEY. (4 cr per qtr; prereq 3101, 3103 or equiv, Math 1251-1252-1261 or equiv)

5733: Real intertemporal economics; overlapping-generations models of interest rates; applications to social security and deficit finance. 5734: Monetary theory: theories of money applied to commodity and fiat systems, and to systems with unregulated and regulated banking.

5741. BUSINESS CYCLES. (4 cr; prereq 3101, 3102, Stat 3011 or equiv)

Ups and downs of business; causes and statistical data; relationship of cycles to economic growth. Methods of forecasting. Proposals for stabilization.

5741H. HONORS COURSE: BUSINESS CYCLES. (5 cr; prereq 3101, 3102, Stat 3011 or equiv, 1 qtr calculus; B avg recommended)

Public Finance

3801. ELEMENTS OF PUBLIC FINANCE. (4 cr, §5821; prereq 1101, 1102 or equiv; not open to economics majors)

Tax and expenditure policies, primarily at federal level. Impact of tax structure on the distribution of income. Evaluation of public programs. Optimal mix of public and private sector output.

5821. ELEMENTS OF PUBLIC FINANCE. (4 cr, §3801; prereq 3101, 3103 or equiv)
For description, see 3801.

5831. COST-BENEFIT ANALYSIS. (4 cr; prereq 3101, 3103 or equiv)

Principles for evaluation of benefits and costs of public projects or programs. Definition and measurement of benefits and costs. Rate of return and rate of discount. Treatment of market imperfections, risk, and uncertainty.

5831H. HONORS COURSE: COST-BENEFIT ANALYSIS. (5 cr; prereq 3101, 3103 or equiv, 1 qtr calculus; B avg recommended)

Directed Study

3951. MAJOR PROJECT SEMINAR. (2 cr; prereq 3101, 3102, 3103 or equiv)

3960. TOPICS IN ECONOMICS. (4 cr per qtr; prereq 3101, 3102 or equiv [others may be stated in the *Class Schedule*])

Topics specified in the *Class Schedule*.

3970. DIRECTED STUDIES. (Cr ar; prereq #)
Guided individual reading or study in areas not available in regular course offerings.

5960. TOPICS IN ECONOMICS. (4 cr per qtr; prereq 3101, 3102, 3103 or equiv [others may be stated in *Class Schedule*])

Topics specified in the *Class Schedule*.

5970. DIRECTED STUDIES. (Cr ar; prereq #)

For description, see 3970.

College of Education

Courses appearing in the CLA bulletin are approved for CLA credit. However, CLA students may take up to 28 credits of coursework offered by other colleges. The credits may be applied toward CLA degrees and in some cases may be used to fulfill general education requirements. Consult your college office adviser for a list of courses from other colleges approved for general education requirements.

Descriptions of courses offered by the College of Education can be found in the bulletin of that college.

Information about the requirements for entering the College of Education can be found in the third section of this bulletin.

English (Engl)

Staff—Chair, Philip Furia, 207 Lind Hall; **Associate Chair,** Arthur Geffen, 207 Lind Hall; **Director of Undergraduate Studies,** Archibald Leyasmeyer, 209 Lind Hall; **Undergraduate Adviser,** Beverly Atkinson, 209 Lind Hall; **Director of Graduate Studies,** Kent Bales, 205 Lind Hall; **Director of Program in Creative Writing,** Michael Dennis Browne, 224 Lind Hall; **Assistant to Director/Adviser,** Christine Mack Gordon

Regents' Professor: G.T. Wright

Professors: Anderson, Bales, Browne, Burns, Clayton, Escure, Firchow, Fruman, Furia, Garner, Griffin, Hampl, Hancher, Hirsch, Kendall, MacLeish, McNaron, Reed, Ross, Roth, Solotaroff, Sprengnether, Stekert, Wallace, Weinsheimer

Associate Professors: Anson, Bridwell-Bowles, Brown, Copeland, Fitzgerald, Geffen, Haley, Hoy, Leyasmeyer, Messer-Davidow, Miner, Mowitt, Przybylowicz, Sugnet, J. Wright

Major Requirements and Course Descriptions

Assistant Professors: Damon, Elfenbein, Luke, Rabinowitz

English department courses examine both canonical and noncanonical literatures from a variety of viewpoints and consider the place of such works within their cultural contexts. The study of literary forms and techniques, the language itself, and theories of art and criticism is informed by such disciplines as philosophy, psychology, history, political science, and anthropology. Courses in current critical approaches orient students to directions in the study of literature, while work in composition and practical criticism provides intensive practice in writing. All courses are designed to help students develop skills in critical reading and effective expression.

General Information—Course information is available in the Undergraduate Studies Office, 209 Lind Hall. Book lists for each course and descriptions of topics and figures courses in English and American literature are available in both 209 and 207 Lind Hall.

Study Abroad—Students are encouraged to incorporate international study into an English major or minor. The University offers a number of exchange programs and other opportunities to study in regular classes at British or other international universities. The department itself sponsors a program, Literature and Theatre in London, offered each spring. It includes courses centering on Shakespeare and other figures in British literature for whom the city and its surroundings were important. See also Foreign Study.

B. A. Major Sequence

Required Preparatory Courses—To be accepted into the major, all students must have a minimum of 60 degree credits, a minimum of 16 credits in English coursework (including 4 credits of 3xxx English, but *not* including required composition courses), a GPA of 2.50 in English, and at least two writing samples.

Students who declare English as their major will be classified as “pre-Engl” until the above prerequisites are met and they formally apply for major status following written procedures (including criteria for the writing samples) available from the English Undergraduate Studies Office, 209 Lind Hall.

Upon admission, students will plan their programs with a department major adviser.

Major Requirements—Twelve 4-cr courses in English, English Writing, or Composition (beyond those taken to satisfy the current CLA composition requirement) and Engl 3961 (1 cr): 11 courses at the 3xxx or 5xxx level, including at least three at the 5xxx level. (Three courses may be graded S.) Beyond the common requirements to be taken by all majors, there are three concentrations, each with specific requirements. For more information about each concentration, inquire in 209 Lind Hall.

Upon admission, a student’s overall GPA in English must be 2.50 or higher. Independent Study credits are limited to 12 and no more than 4 Extension Independent Study credits may be at the 3xxx or 5xxx level.

Common Requirements: 3008; one course in Shakespeare (3241 or 3242 or 3243); major paper through Engl 3961 (1 cr) registration, written in conjunction with 3960 according to guidelines in the *English Major Handbook*, available in the Undergraduate Studies Office.

Requirements for Concentrations:

General Literary Studies—Two other 3xxx or 5xxx courses in British literature before 1900

One 3xxx or 5xxx course in British or American literature after 1900

One 3xxx or 5xxx course in the study of language or literary theory

Engl 3960 Junior-Senior Seminar

Engl 3961 (1 cr) Senior Paper or Engl 3963H (4 cr) Honors Thesis for *summa cum laude* candidates

Five elective courses, four of which must be at least 3xxx level

Students will complete three 5xxx courses

Students are strongly encouraged to take a course in literature of American minorities as one of their electives.

Pre-Secondary Education—Two 3xxx or 5xxx courses in British literature before 1900

Two 3xxx or 5xxx courses in American literature. Students are strongly encouraged to take a course in literature of American minorities as one of these courses.

Two 3xxx or 5xxx courses in the study of the English language

One 3xxx course in composition (in addition to the CLA requirement)

Engl 3960 Junior-Senior Seminar

Engl 3961 (1 cr) Senior Paper or Engl 3963H (4 cr) Honors Thesis for *summa cum laude* candidates

Two 3xxx or 5xxx elective courses

Students will complete three 5xxx courses

Recommended nonmajor electives: Continental, Classic, and/or Western literature; Spch 3411 or 5411

Graduate/Pre-Professional—3004

Two "age" courses in British literature before 1900; 3115, 3116, 3117, 3118, 3119.

Chaucer (5221) or Milton (5261)

One 3xxx or 5xxx course in American Literature

One 3xxx or 5xxx course in the study of the English language

One 3xxx or 5xxx course in literary theory

Engl 3960 Junior-Senior Seminar

Engl 3961 (1 cr) Senior Paper or Engl 3963H (4 cr) Honors Thesis for *summa cum laude* candidates

Two 3xxx or 5xxx electives

Students must complete three 5xxx courses.

Students are strongly encouraged to take a course in literature of American minorities as one of their electives. They also are encouraged to take a second Shakespeare

course and The King James Bible as Literature.

The Senior Project may be written in conjunction with a Junior-Senior Seminar, an English Quarter, or as an independent study project under the supervision of a faculty member.

All majors will find additional suggestions and guidelines applicable to specific concentrations in the *English Major Handbook* and in individual handouts obtainable in the Undergraduate Studies Office, 209 Lind Hall.

Major Project: Major paper written in conjunction with 3960 according to guidelines in the *English Major Handbook*, available in the Undergraduate Studies Office.

Minor Sequence

Required Preparatory Course—3008

Minor Requirements—Six 4 cr courses in English or composition (beyond those taken to satisfy the CLA composition requirement) at the 3xxx or 5xxx level (one may be taken S-N). They must be distributed as follows:

One course in Shakespeare (3241 or 3242 or 3243)

One course in English or American literature before 1800

One course in English or American literature after 1800

One course in the English language or literary theory

Two elective courses

A list of courses that may be applied to each of the categories may be obtained in the Undergraduate Studies Office. Programs must be approved by the undergraduate adviser.

1005. INTRODUCTION TO LITERATURE. (4 cr)
Understanding and enjoying literature. Readings of novels, short stories, poems, and plays.

1005H. HONORS COURSE: INTRODUCTION TO LITERATURE. (4 cr)
For description, see 1005.

Major Requirements and Course Descriptions

1013. FAMOUS ENGLISH AND AMERICAN POEMS. (4 cr)

Shorter poems by English and American poets, ranging from the Renaissance to the present. An introduction to the reading of poetry; introduction to poems traditionally thought basic to English and American literature.

1016. INTRODUCTION TO AMERICAN LITERATURE. (4 cr)

Critical discussion of and writing about selected works of American literature. Typical authors: Poe, Hawthorne, Whitman, Dickinson, Twain, Frost, Fitzgerald, Hurston.

1016H. HONORS COURSE: INTRODUCTION TO AMERICAN LITERATURE. (4 cr)

For description, see 1016.

1017. INTRODUCTION TO MODERN POETRY. (4 cr)

Critical discussion of and writing about selected modern poems. Typical authors: Thomas, Frost, Moore, Yeats, Hardy, Cummings.

1018. INTRODUCTION TO MODERN FICTION. (4 cr)

Critical discussion of and writing about selected modern novels and stories. Works selected each quarter from authors such as Atwood, Cather, Drabble, Ellison, Hemingway, Joyce, Kingston, Lawrence, Morrison, Murdoch, Silko, and Wolfe.

1018H. HONORS COURSE: INTRODUCTION TO MODERN FICTION. (4 cr)

For description, see 1018.

1019. INTRODUCTION TO MODERN DRAMA. (4 cr)

Critical discussion of and writing about selected modern plays. Typical authors: Ibsen, Shaw, Synge, Chekhov, O'Neill, Williams, Beckett.

1020. TOPICS: INTRODUCTION TO LITERATURE. (4 cr)

Topics specified in the *Class Schedule*; course descriptions available before registration from the English Undergraduate Studies Office, 209 Lind Hall.

1069. GREAT PLAYS. (4 cr)

Introduction to some of the world's great plays, from ancient Greece to our own culture. Plays represent a variety of countries, periods, and theatrical modes.

1241. INTRODUCTION TO SHAKESPEARE. (4 cr)

Lecture survey of Shakespeare's work, treating approximately 10 plays. For students in all colleges of the University.

1591. LITERATURE OF AMERICAN MINORITIES. (4 cr)

Representative works by African American, American Indian, Asian American, and Chicano/Chicana writers. Examination of relevant social factors.

1595. INTRODUCTION TO "THIRD WORLD" LITERATURES IN ENGLISH. (4 cr)

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).

1621. INTRODUCTION TO WOMEN WRITERS. (4 cr)

Works by several major women writers writing in English.

1671. THE SHORT STORY. (4 cr)

Lecture introduction to short stories, with some emphasis on the history and diversity of the form. Typical authors: Poe, Chekhov, Lawrence, Joyce, Kafka, Porter, Welty, Faulkner.

3008. TECHNIQUES OF LITERARY STUDY. (4 cr; prereq Engl major or minor or premajor)

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.

3009. MODERN LITERARY THEORY. (4 cr; prereq Engl major or minor, 3008 or 16 cr literature or Δ)

Problems of interpretation and criticism. Questions of meaning, form, authority, literary history, social significance.

3009H. HONORS COURSE: MODERN LITERARY THEORY. (4 cr; prereq Engl major or minor, 3008 or 16 cr literature or Δ)

For description, see 3009.

3115. THE MIDDLE AGES. (4 cr)

Major and representative works of the Middle Ages (650-1485). Typical readings: *Beowulf*, Chaucer, ballads, *Sir Gawain and the Green Knight*, *Everyman*.

3116. THE RENAISSANCE. (4 cr)

Major and representative works of the Renaissance (1485-1660). Typical authors: More, Sidney, Spenser, Shakespeare, Donne, Milton.

3117. THE RESTORATION AND 18TH CENTURY. (4 cr)

Major and representative works of the Restoration and 18th century (1660-1798). Typical authors: Dryden, Pope, Swift, Johnson, Boswell, Fielding.

3118. THE ROMANTIC AGE. (4 cr)

Major and representative works of the romantic period (1798-1832). Typical authors: Blake, Wordsworth, Coleridge, Byron, Shelley, Keats.

3119. THE VICTORIAN AGE. (4 cr)

Major and representative works of the Victorian period (1832-1901). Typical authors: Tennyson, Browning, Hopkins, Arnold, Dickens, the Brontës.

3121. THE MODERN AGE. (4 cr)

Major and representative works of modern and contemporary British literature. Typical authors: Yeats, Shaw, Joyce, Woolf, Auden, Lessing.

3218. MEDIEVAL LITERATURE IN TRANSLATION. (4 cr)

Art of narrative in European Middle Ages. Typical readings (in translation): *Lives of the Fathers*, *Beowulf*, *Song of Roland*, *Nibelungenlied*, *Tristan, Njal's Saga*, *Troilus, Criseyde*, and others.

3238. THE EUROPEAN RENAISSANCE IN ENGLAND. (4 cr)

Masterpieces of English Renaissance by authors from Moore to Milton compared with works by continental authors such as Boccaccio, Machiavelli, Erasmus, Ariosto, Rabelais, Montaigne, and Cervantes.

3241, 3242. SHAKESPEARE. (4 cr per qtr, §3243)

3241: 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. **3242:** Plays from the middle and late periods. All sections read *King Lear*, *Macbeth*, *The Tempest*, and two or three others.

3241H, 3242H. HONORS COURSE: SHAKESPEARE. (4 cr per qtr)

For description, see 3241, 3242.

3251, 3252. THE KING JAMES BIBLE AS LITERATURE. (4 cr per qtr)

Narrative art and poetry in Old and New Testaments. **3251:** Pentateuch, historical narratives, and the Writings (including Psalms, Proverbs, Job, Song of Solomon, Ruth, Lamentations, Ecclesiastes, Esther, and Daniel) **3252:** Prophets, Apocrypha, and New Testament.

3355, 3356, 3357. MODERN BRITISH LITERATURE. (4 cr per qtr)

Historical survey of writers, intellectual currents, movements, conventions, genres, and themes. **3355:** 1900-1925: Authors: Conrad, Ford, Wells, Bennett, Forster, Mansfield, Lawrence, Joyce, Woolf. Playwrights: Shaw, Synge. Poets: Hardy, Yeats, Eliot, Kipling, Imagists, Georgians, war poets. **3356:** 1920-1950: Authors: Joyce, Woolf, Huxley, Waugh, Rhys, Compton-Burnett, Greene, Isherwood, Orwell, Bowen. Playwrights: O'Casey, Coward, Auden, Isherwood. Poets: Eliot, Yeats, Auden, Spender, Thomas. **3357:** 1950-1990: Authors: Cary, Greene, Murdoch, Fowles. Playwrights: Beckett, Osborne, Pinter, Stoppard. Poets: Larkin, Hughes.

3411, 3412, 3413. SURVEY OF AMERICAN LITERATURE. (4 cr per qtr)

Historical survey of important writers, intellectual currents, movements, conventions, genres, and themes. Lecture course, with wide reading. **3411:** Beginnings through Hawthorne (to 1850). **3412:** Thoreau and Melville through James (1850-1900). **3413:** Stephen Crane through World War II (1900-1945).

3455. AMERICAN SHORT STORY. (4 cr)

Typical authors: Irving, Poe, Hawthorne, Twain, Crane, Wright, Jewett, Cather, Faulkner, Welty, Bellow, Oates.

3481. AMERICAN FOLKLORE. (4 cr)

Introduction to the regional, occupational, and ethnic traditions found in the United States. An exploration of the diversity and "American" qualities of expressive traditional folk behavior.

3591. INTRODUCTION TO AFRICAN AMERICAN LITERATURE. (4 cr, §Afro 3591)

African American prose, poetry, and drama from the late 18th to the mid-20th century.

3592. INTRODUCTION TO AFRICAN AMERICAN WOMEN WRITERS. (4 cr, §Afro 3592)

Literary tradition of African American women writers explored in novels, short stories, poetry, essays, autobiography, and drama from the 18th to the 20th century.

3621. BRITISH AND AMERICAN WOMEN WRITERS. (4 cr)

Reading and discussion of major works by 19th- and early 20th-century American women writers, such as Shelley, Austen, Alcott, the Brontës, Stowe, G. Eliot, Gaskell, Jewett.

3651. POETRY. (4 cr)

Historical development of poetry from the Renaissance to the present.

3651H. HONORS COURSE: POETRY. (4 cr; prereq honors regis or Δ)

For description, see 3651.

3671. THE NOVEL. (4 cr)

The novel as a literary form. Readings of selected works of fiction from the 18th century to the present.

3671H. HONORS COURSE: THE NOVEL. (4 cr; prereq honors regis or Δ)

For description, see 3671.

3711. CLASSICS OF LITERARY CRITICISM.

(4 cr, §5711, §CICv 3711)

Study of principles of criticism as expressed and employed in selected major works in the classic critical tradition by such writers as Plato, Aristotle, Horace, Longinus, Sidney, Dryden, Johnson, Hume, Coleridge, Eliot.

3851. THE ENGLISH LANGUAGE. (4 cr, §5851)

The English language: its structure (phonetics, phonology, morphology, syntax, semantics) and its use (pragmatics, dialect variation, and first language acquisition).

Major Requirements and Course Descriptions

3852. ASPECTS OF THE ENGLISH LANGUAGE. (4 cr)

English grammar, phonetics and phonology, regional and social dialects. The application of these aspects of English linguistics to the analysis of specific literary texts.

3853. WOMEN AND THE ENGLISH LANGUAGE. (4 cr)

The connections between gender and the English language, including sexist language, feminist theories of language, and the language and style of women writers.

3860. TOPICS IN THE ENGLISH LANGUAGE. (1-4 cr per qtr)

Topics specified in the *Class Schedule*.

3910. TOPICS IN ENGLISH AND NORTH AMERICAN LITERATURE. (4 cr per qtr)

Topics specified in the *Class Schedule*.

3920. TOPICS IN ANGLOPHONE LITERATURE. (4 cr)

Topics specified in *Class Schedule*.

3931, 3932. ENGLISH QUARTER. (1-8 cr per course [both courses taken during same quarter]; prereq completion of 3xxx composition requirement; Comp 3011 or 3012 or 3013 highly recommended, Δ)
Broad topic of literary investigation crossing and integrating several areas of study. Team taught.

3940. FIGURES IN ENGLISH AND NORTH AMERICAN LITERATURE. (4 cr)

Figures specified in the *Class Schedule*.

3950. FIGURES IN ANGLOPHONE LITERATURE. (4 cr)

Figures specified in *Class Schedule*.

3960. JUNIOR-SENIOR SEMINAR. (4 cr per qtr; prereq English major, jr or sr, completion of 3xxx composition requirement, Δ ; Comp 3011 or Comp 3012 or Comp 3013 highly recommended)
Intensive study of a major literary topic, figure, period, or genre. Primarily for majors and honors candidates in English. Topic specified in the *Class Schedule*. (Request admission at least two quarters before graduation. Forms available in 209 Lind Hall.)

3961. SENIOR PAPER. (1 cr; prereq English major, sr, concurrent or previous registration in either Engl 3931-3932 or EngW 3960, major adviser permission; S-N only)

Required of English majors, usually taken in the senior year. Critical analysis or research or creative writing paper usually in conjunction with either Engl or EngW 3960 or Engl 3931-3922.

3963. HONORS THESIS. (4 cr; prereq honors candidacy in English and consent of English honors adviser)

3970. DIRECTED STUDIES. (1-15 cr per qtr; prereq #)

Guided individual reading or study.

3980. DIRECTED INSTRUCTION. (Cr ar; prereq #)

5131. RENAISSANCE POETRY. (4 cr; prereq grad or Engl major or Δ)

Major figures; historical and intellectual background; poetic theory. Such authors as Wyatt, Sidney, Spenser, Donne, Herbert, Jonson.

5133. 19TH-CENTURY BRITISH POETRY. (4 cr; prereq grad or Engl major or Δ)

Major figures; historical and intellectual background; poetic theory. Such authors as Wordsworth, Coleridge, Keats, R. Browning, E. B. Browning, C. Rossetti, Tennyson, Arnold.

5151. 18TH-CENTURY ENGLISH NOVEL. (4 cr; prereq grad or Engl major or Δ)

Novels by such authors as Defoe, Richardson, Fielding, Smollett, Sterne, Austen.

5152. 19TH-CENTURY ENGLISH NOVEL. (4 cr; prereq grad or Engl major or Δ)

Novels by such authors as Scott, Dickens, the Brontës, Thackeray, Eliot, Hardy.

5153. 20TH-CENTURY ENGLISH NOVEL. (4 cr; prereq grad or Engl major or Δ)

Novels by such authors as Conrad, Ford, Joyce, Woolf, Lawrence, Forster, Cary, Waugh, Murdoch.

5171. ENGLISH DRAMA TO THE TIME OF SHAKESPEARE. (4 cr; prereq 3241 or 3242, grad or Engl major or Δ)

Mystery plays, moralities, interludes, academic and court plays; plays of Kyd, Marlowe, Lyly, Greene, Peele.

5173. RESTORATION AND 18TH-CENTURY DRAMA. (4 cr; prereq 3241 or 3242, grad or Engl major or Δ)

The heroic play, tragedy, comedy of manners, sentimental comedy.

5174. MODERN DRAMA, 1880-1920. (4 cr; prereq grad or Engl major or Δ)

Beginnings of modern realism, naturalism, and expressionism in English and continental drama.

5175. MODERN DRAMA SINCE 1920. (4 cr; prereq grad or Engl major or Δ)

Survey of chief dramatists, English, American, and continental.

5211. OLD ENGLISH (ANGLO-SAXON). (5 cr; prereq grad or Engl major or Δ)

Introductory study of the language to A.D. 1150. Selected readings in prose and poetry. Some attention to the culture of the Anglo-Saxons.

5212. READINGS IN OLD ENGLISH PROSE AND VERSE. (4 cr; prereq 5211, grad or Engl major or Δ)

Critical reading of texts; introduction to versification.

5213. BEOWULF. (4 cr; prereq 5211, grad or Engl major or Δ)

Reading of considerable portions of the text.

5215. MAJOR TYPES OF MIDDLE ENGLISH LITERATURE. (4 cr; prereq 5221, grad or Engl major or Δ)

Readings in Middle English romance, lyric, allegory, and devotional prose.

5221. CHAUCER: THE CANTERBURY TALES.

(5 cr; prereq grad or Engl major or Δ)

Reading *The Canterbury Tales*; introduction to Chaucer's language.

5261. MILTON. (4 cr; prereq grad or Engl major or Δ)

Paradise Lost, *Samson Agonistes*, minor poems, *Areopagitica*, and often *Paradise Regained*.

5363, 5364. JAMES JOYCE. (4 cr per qtr; prereq grad or Engl major or Δ)

5363: Life and early works, particularly *Dubliners*, *A Portrait of the Artist as a Young Man*, and the first four episodes of *Ulysses*. *5364*: *Ulysses* and *Finnegan's Wake*.

5431, 5432, 5433. AMERICAN POETRY. (4 cr per qtr; prereq grad or Engl major or Δ)

Major figures; historical and intellectual background; poetic theory. *5431*: Beginnings to 1890. Typical authors: Bradstreet, Taylor, Poe, Whitman, Bryant, Dickinson. *5432*: 1890-1940. Typical authors: Frost, Stevens, Pound, Moore, Hughes, Williams, Stein. *5433*: Since 1940. Typical authors: Lowell, Ginsberg, Plath, Rich, Kaufmann, Baraka, Brooks.

5451, 5452. AMERICAN NOVEL. (4 cr per qtr; prereq grad or Engl major or Δ)

5451: Through the 19th century. Typical authors: Cooper, Hawthorne, Melville, Stowe, Twain, Chopin, James. *5452*: Late 19th and 20th centuries. Typical authors: James, Dreiser, Cather, Hemingway, Fitzgerald, Faulkner, Ellison, Morrison.

5471. AMERICAN DRAMA. (4 cr; prereq grad or Engl major or Δ)

American drama from 1914 to present; representative American plays of the 18th, 19th, and early 20th centuries. Emphasis on plays since 1914.

5481, 5482, 5483. FOLKLORE. (4 cr per qtr; prereq 5481 or 5482 or # for 5483, grad or Engl major or Δ)

5481: Folklore genres such as proverbs, prose narratives (tales and legends), foodways, and games. Outline of the history of folklore. *5482*: The manner in which folklore is transmitted and changed, with emphasis on how folklore functions in literature, the mass media, and everyday activity. Emphasis on folk customs, festivals, heroes, humor and medicine. *5483*: Training in collection of folklore materials.

5593. THE AFRICAN AMERICAN NOVEL. (4 cr, §Afro 5593; prereq grad or Engl major or Δ)

Contextual readings of 19th- and 20th-century black novelists such as Chesnut, J.W. Johnson, Hurston, Wright, Himes, Petry, Baldwin, J. Williams, Morrison, Reed.

5597. HARLEM RENAISSANCE SEMINAR. (4 cr, §Afro 5597; prereq grad or Engl major or Δ)

Multidisciplinary review of the Jazz Age's Harlem Renaissance: literature, popular culture, visual arts, political journalism, and black and white figures such as Toomer, McKay, Hughes, Bessie Smith, Heyward, Van Vechten, O'Neill, Garvey.

5620. BRITISH AND AMERICAN WOMEN WRITERS. (4 cr per qtr [16 cr max]; prereq grad or Engl major or Δ)

Readings in works of one or more women writers, perhaps examining various times within various forms. Writers specified in the *Class Schedule*.

5651. TECHNIQUES OF POETRY. (4 cr per qtr; prereq grad or Engl major or Δ)

Poetry analysis. Form and sound: meter, stanza, euphony, free verse.

5671. THEORY OF THE NOVEL. (4 cr; prereq grad or Engl major or Δ)

Readings in theoretical criticism of the novel with application to selected British and American fiction.

5711. CLASSICS OF LITERARY CRITICISM.

(4 cr, §3711, §CICv 3711, §CICv 5711; prereq grad or Engl major or Δ)

Principles of criticism as expressed and employed in major works in the classic critical tradition, with emphasis on Aristotle and Coleridge. May include Plato, Horace, Longinus, Sidney, Dryden, Johnson, Hume, Eliot.

5712. LITERARY CRITICISM: PLATO TO DRYDEN. (4 cr; prereq grad or Engl major or Δ)

Survey, in English translation, of basic texts in Roman and Greek criticism, and representative texts of English neoclassical criticism up to 1700.

5714. MODERN AND CONTEMPORARY CRITICAL THEORY. (4 cr; prereq grad or Engl major or Δ)

Readings in modern and postmodern literary criticism; emphasis on contemporary movements, theory, and practice.

5811. CELTIC WORLD. (4 cr; prereq grad or Engl major or Δ)

Survey of the history, folklore, and literature of the six Celtic countries (Brittany, Cornwall, Ireland, Isle of Man, Scotland, and Wales).

5815. HISTORY OF ENGLISH LANGUAGE. (4 cr; prereq grad or Engl major or Δ)

Development of the English language from Old to Early Modern English: phonology, morphology, and syntax.

5831. AMERICAN ENGLISH. (4 cr; prereq grad or Engl major or Δ)

History of the English language in the United States; significant regional variation.

Major Requirements and Course Descriptions

5843. AMERICAN SOCIAL DIALECTS. (4 cr; prereq grad or Engl major or Δ)

Methods for and results of investigating social and class variation in American English; urban dialects.

5851. STRUCTURE OF MODERN ENGLISH. (4 cr, §3851; prereq grad or Engl major or Δ)

Survey of modern English grammar: phonology, syntax, and semantics; variations and change.

5852, 5853, 5854. MODERN IRISH LANGUAGE.

(5 cr per qtr; prereq 5852 for 5853, 5853 for 5854, grad or Engl major or Δ)

Surveys grammatical structures of modern Irish dialect of Connemara, Co. Galway; development of skills in oral and written language: vocabulary, manipulation of grammatical structures, speaking, listening, reading, and writing practice; modern Gaelic culture.

5860. STUDIES IN THE ENGLISH LANGUAGE.

(4 cr per qtr; prereq 5851 or #, grad or Engl major Δ)

Topic (English phonology, syntax, or semantics) specified in the *Class Schedule*.

5862. WORLD ENGLISHES. (4 cr; prereq grad or Engl major or Δ)

Examines development, significance, and linguistic characteristics of varieties of English spoken in non-western countries (Caribbean, Central America, Africa, Asia). Pidgins, creoles, and local standards with reference to cultural identity and language nativization.

5871. THE LANGUAGE OF LITERATURE. (4 cr; prereq grad or Engl major or Δ)

The place of linguistic analysis in a theory of literary criticism; stylistic analysis in Europe and America since 1920; theories of linguistic description relevant to critical analysis; applications to texts in prose and poetry.

5910. TOPICS IN ENGLISH AND NORTH AMERICAN LITERATURE. (4 cr per qtr; prereq grad or Engl major or Δ)

Topics specified in the *Class Schedule*.

5920. TOPICS IN ANGLOPHONE LITERATURE.

(4 cr; prereq grad or Engl major or Δ)

Topics specified in the *Class Schedule*.

5931, 5932. ADVANCED ENGLISH QUARTER.

(1-8 cr per course [both courses taken during same quarter]; prereq completion of 3xxx composition requirement, Δ; Comp 3011 or 3012 or 3013 highly recommended)

Broad literary investigation, integrating several areas of study. Team taught.

5940. FIGURES IN ENGLISH AND NORTH AMERICAN LITERATURE. (4 cr per qtr)

Figures specified in the *Class Schedule*.

5950. FIGURES IN ANGLOPHONE LITERATURE. (4 cr; prereq grad or Engl major or Δ)

Figures specified in the *Class Schedule*.

5970. DIRECTED STUDIES. (1-4 cr)

Creative Writing (EngW)

The Program in Creative Writing is a part of the English department and is partially supported by funds from the Edelstein-Keller Endowment for Creative Writing. The program offers courses designed for students in all majors and provides special undergraduate sections for English majors. It also offers master's degrees in writing.

Note: Admission to most classes at the 5xxx level and above is granted on the basis of writing samples submitted. To obtain written directions about how to apply for admission to those courses, contact the program office at 224 Lind Hall (612/625-6366).

1101. INTRODUCTION TO CREATIVE WRITING. (4 cr)

Introduction to writing fiction, poetry, and memoir. Class format: combination of small-group workshops and lecture presentations by visiting writers. For those who want to try creative writing, improve reading skills, and learn more about the creative process.

1102. INTRODUCTION TO FICTION WRITING.

(4 cr; prereq fulfillment of writing practice requirement or EngW 1101)

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.

1103. INTRODUCTION TO POETRY WRITING.

(4 cr; prereq fulfillment of writing practice requirement or EngW 1101)

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.

3102. INTERMEDIATE FICTION WRITING. (4 cr; prereq EngW 1102 or equiv)

For students with experience in writing fiction. Exercises, experiments, assigned readings, and discussion of students' work.

3103. INTERMEDIATE POETRY WRITING. (4 cr; prereq EngW 1103 or equiv)

For students with experience in writing poetry. Exercises, experiments, assigned readings, and discussion of students' work.

3110. TOPICS IN CREATIVE WRITING. (4 cr; prereq EngW 1101, 1102, 1103 or equiv)

Special topics for students with experience in creative writing. See the *Class Schedule* for details of particular topics.

3960. WRITING WORKSHOP FOR MAJORS.

(4 cr; prereq Engl major, 8 cr of EngW, jr or sr, completion of 3xxx composition requirement, major adviser permission, Δ; Comp 3011 or 3012 or 3013 highly recommended)

Writing workshop for English majors, usually taken during the senior year. Topic specified in the *Class Schedule*.

3970. DIRECTED STUDY IN WRITING. (1-4 cr; prereq #)

Projects in writing poetry, fiction, drama, and nonfiction, or study of ways to improve writing.

5101, 5102, 5103. ADVANCED FICTION WRITING. (4 cr per qtr; prereq creative writing grad or Δ)
Advanced workshop for students with considerable experience in writing fiction.

5105, 5106, 5107. ADVANCED POETRY WRITING. (4 cr per qtr; prereq creative writing grad Δ)

Advanced workshop for students with considerable experience in writing poetry. Gives students an opportunity to explore new poetic possibilities and to read widely in contemporary poetry and poetics.

5110. TOPICS IN ADVANCED FICTION WRITING. (4 cr; prereq creative writing grad or Δ)
Special topics in fiction writing. See the *Class Schedule* for details of particular topics.

5120. TOPICS IN ADVANCED POETRY WRITING. (4 cr; prereq grad or Engl undergrad major or Δ)
Special topics in poetry writing. See the *Class Schedule* for details of particular topics.

5130. TOPICS IN ADVANCED CREATIVE WRITING. (4 cr; prereq grad or Engl undergrad major or Δ)
Advanced workshop that might include work in more than one genre.

5204, 5205. ADVANCED PLAYWRITING. (4 cr per qtr; prereq creative writing or theatre grad or Δ)
Advanced workshop for students with experience in creative writing and an interest in writing for stage or screen. Step-by-step creation of a short script. Field trips to local productions.

5210. TOPICS IN ADVANCED NONFICTION WRITING. (4 cr; prereq creative writing grad or Δ)
Special topics such as arts reviewing, writing about public affairs, and writing in the personal voice. See the *Class Schedule* for details of particular topics.

5310, 5320. READING AS WRITERS. (4 cr per qtr; prereq creative writing grad or Δ)
Special topics such as reading the memoir or short story. See the *Class Schedule* for details of particular topics.

5401. INTRODUCTION TO PROFESSIONAL EDITING. (4 cr)

Beginning editing, from the nature of the editor-writer relationship to manuscript reading, author querying, rewriting, and style. Some discussion of copy editing. Students develop editing skills by working on varied writing samples.

5402. ADVANCED PROFESSIONAL EDITING. (4 cr; prereq EngW 5401, Δ)

Workshop/seminar for students with basic editing competence. Provides opportunity to edit a long text and exposure to other types of editing such as fiction, children's literature, and translations.

5970. DIRECTED STUDY IN WRITING. (1-4 cr; prereq #)
Projects in writing poetry, fiction, drama, and nonfiction.

Composition and Communication (Comp)

Staff—Director, Christopher M. Anson, 306 Lind Hall

Professor: Ross

Associate Professors: Anson, Bridwell-Bowles, Brown

CLA and most other colleges of the University require students to satisfy the writing practice requirement and to complete a 3xxx course in their junior or senior years.

Writing Practice Requirement—Students fulfill this requirement through successful completion of Comp 1011. Students whose work does not meet an acceptable standard in their first course will receive a continuation grade (X) and will take Comp 1013 to complete the requirement.

Placement in Writing Practice—As an incoming freshman, you will be given a Memorandum on Placement, which notes assignment, on the basis of tests and other factors, to one of the following categories:

*Category 1—*Exempt from the writing practice requirement and eligible to take any course for which exemption from or completion of the requirement is a prerequisite. Students must still complete the 3xxx-level requirement.

*Category 2—*Must take Comp 1011 or 1011H.

*Category 3—*Must take Comp 1011.

Major Requirements and Course Descriptions

Category 4—Must complete Comp 0011 before taking Comp 1011.

Category 5—Must register for Comp 1011 pending receipt of information necessary for assignment to another category (results of placement test, for example). Students may be referred for testing.

Concurrent Registration—Concurrent registration in a writing practice and an intermediate or advanced composition course is not permitted.

Transfer Students—Transfer students should consult their advisers about the application of transferred composition coursework toward the freshman Writing Practice Requirement, about selecting appropriate courses, or referral for testing.

Students exempted from a freshman composition requirement at another college should consult the Composition Office, 306 Lind Hall, for evaluation.

Upper-Level Writing Course (3011-3085, with the exception of 3022)—Students in most colleges and CLA departments must complete one 3xxx composition course that focuses on writing in the context of their major area of concentration. Most colleges and CLA departments have specified which course or courses are most appropriate for their majors. Approval to take a course is given by the major department, not the Composition Program.

Students not adequately prepared for an upper-level composition course may be advised to take an intermediate-level course or to go to the Writing Lab to gain additional experience.

Students absent the first day will lose their places in class. Permission of the instructor is required to register after the first class. Instructors do not keep waiting lists.

Creative writing or journalism courses may not be used to fulfill either the writing practice or the upper-level requirement.

International Students—Special sections of composition designed for international students are listed in the *Class Schedule* under Composition with the designation “non-

native speakers only.” Questions regarding English placement should be directed to the coordinator of composition for non-native speakers of English, 175 Klaeber Court.

Writing Lab—The Composition Program offers individual instruction without charge to all University students. Students who wish to develop their writing skills are invited to consult the lab; faculty members in any department may advise their students to do so. Further information is available in the Composition Office, 306 Lind Hall.

Creative Writing—The English department offers a full selection of creative writing courses for beginning, intermediate, and advanced writers. See descriptions listed under Creative Writing in the English section. See also Engl 5970—Directed Study in Writing.

0011. PREPARATION FOR WRITING PRACTICE.

(No cr; prereq assignment to Category 4, S-N only)
Extensive practice in expository writing: organizing information, defining paragraphs, providing sufficient detail, analyzing audience needs, and revising. Sentence combining, grammar, and mechanics. Work on individual problems in a workshop environment.

1011. WRITING PRACTICE I. (5 cr; prereq assignment to Category 2 or 3)

Guided practice in solving writers' problems: defining purpose, organizing and developing content, analyzing audience, drafting the whole essay and its parts, and revising and editing to master fundamentals of expository structure and style. Special attention to basic skills, syntactic fluency, and editing as needed.

1011H. WRITING PRACTICE I. (5 cr, §1101; prereq assignment to Category 2 or 3, honors student)

Essentially the same as 1011, with increased emphasis on critical readings.

1013. WRITING PRACTICE II. (1-4 cr; prereq grade of X in 1011 or 1011H)

Intensive work on individual writing problems. Number of credits and curriculum determined by assessment. Students should register for four credits.

1027. INTERMEDIATE EXPOSITORY WRITING. (4 cr; prereq fulfillment of writing practice requirement)

Focuses on the range of choices writers make based on audience, purpose, and context. Relies on critical reading and a variety of written assignments to improve students' control over their writing and the effect it will have on their intended audiences.

3011. WRITING ABOUT LITERATURE. (4 cr; prereq fulfillment of writing practice requirement, jr)
Primary focus on presenting the active reading of literary works (poems, plays, fiction) in literary commentary and criticism, primarily for academic audiences. Use of secondary sources, with attention to various theoretical and critical approaches.

3012. WRITING IN THE HUMANITIES. (4 cr; prereq fulfillment of writing practice requirement, jr)
Writing on topics in which historical and multicultural perspectives are brought together in the context of these disciplines. Assignments involve integrating primary texts with critical commentary. Frequent practice in presenting primary materials through paraphrase and summary.

3013. WRITING FOR THE ARTS. (4 cr; prereq fulfillment of writing practice requirement, jr)
Writing in the roles of artist, audience member, and critic to balance subjective responses and academic analysis. Emphasis on the importance of writing to create and maintain the arts communities through grants, reviews, and formal criticism.

3014. WRITING IN THE SOCIAL SCIENCES. (4 cr; prereq fulfillment of writing practice requirement, jr)
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.

3015. WRITING ABOUT SCIENCE. (4 cr; prereq fulfillment of writing practice requirement, jr)
Emphasizes close connection between writing and the practice of science. Through description papers, scientific papers, grant proposals, literature reviews, response papers, and other projects, students will learn how language functions in a variety of scientific contexts.

3022. CRITICAL READING AND WRITING FOR MANAGEMENT. (4 cr; prereq fulfillment of writing practice requirement, Management or Premanagement student with more than 60 cr; does not fulfill CLA upper division writing requirement)
Strategies and conventions for writing in management and related fields. Improving communication skills by incorporating 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.

3027. ADVANCED EXPOSITORY WRITING. (4 cr; prereq fulfillment of writing practice requirement, jr)
For already competent writers; the production of polished writing within and beyond the university setting. Effective argumentation through critical reading and awareness of context and audience.

3031. TECHNICAL WRITING FOR ENGINEERS. (4 cr; prereq fulfillment of writing practice requirement, jr, IT student)
Presenting technical information accurately and clearly with attention to the rhetorical and organizational writing contexts. Analysis of writing situations, style and form of technical reports, and collaborative written and spoken presentations.

3032. PREPROFESSIONAL WRITING FOR BUSINESS. (4 cr; prereq fulfillment of writing practice requirement, Management or BIS student, jr)
Writing for a wide variety of situations and audiences found in business. Form and style of business writing in collaborative and individual assignments. Examples and assignments related as much as possible to students' major fields.

3033. WRITING FOR THE HEALTH SCIENCES. (4 cr; prereq fulfillment of writing practice requirement, student with more than 60 cr)
Addresses writing needs of health sciences students. 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.

3050. TOPICS IN ADVANCED COMPOSITION. (4 cr per qtr [12 cr max]; prereq fulfillment of writing practice requirement, jr, permission of major adviser, Δ)
Nonfiction topics such as description or narration, writing for special audiences, or writing to solve special problems. Topics announced in the *Class Schedule*.

3051. FEMINIST EXPOSITORY WRITING. (4 cr; prereq fulfillment of writing practice requirement, jr)
Covers stages of composing process, explores similarities and differences between feminist and traditional expository language and structure; improves skills as analytical and critical readers.

3085. CONFERENCE COURSE IN ADVANCED COMPOSITION. (4 cr; prereq fulfillment of writing practice requirement, jr, permission of major adviser, Δ)
Writing instruction for individual students may be held in cooperation with students' major departments.

English as a Second Language (ESL)

Director, Minnesota English Center, Mark Landa, 114 Klæber Court

Noncredit English language courses are offered for foreign students who have been admitted or are applying for admission to the University or another institution of higher education. Students are placed in classes, shown below, according to proficiency tests administered through the program office, 102 Klæber Court.

Major Requirements and Course Descriptions

0102. BASIC READING AND COMPOSITION.

(No cr; prereq Δ ; for full-time ESL students; 10 hrs per wk; special fee)

Reading short passages of limited difficulty. Emphasizes main ideas, vocabulary, reading speed, skimming, scanning, and writing fundamentals: spelling, punctuation, paragraphing, and basic organization. Writing exercises and free writing.

0103. BASIC SPOKEN ENGLISH. (No cr; prereq Δ ; for students studying English full-time; 10-15 hrs per wk; special fee)

Emphasizes listening and speaking in everyday social interaction; practice of basic structures in meaningful contexts in controlled speaking and writing activities.

0111. LOWER INTERMEDIATE GRAMMAR.

(No cr; prereq Δ ; for students studying English full-time; 5 hrs per wk; special fee)

Reviews and adds to students' skills with basic structures, emphasizing increasingly complex structures, with attention to form, meaning, and use; practice of structures in controlled speaking and writing activities.

0112. LOWER INTERMEDIATE READING AND COMPOSITION. (No cr; prereq Δ ; for full-time ESL students; 10 hrs per wk; special fee)

Reading for main and supporting ideas with increased speed. Vocabulary through study of word-formation and use of dictionary. Review of writing fundamentals; emphasizes organization. Writing as process including revision.

0113. LOWER INTERMEDIATE SPEAKING/ PRONUNCIATION. (No cr; prereq Δ ; for students studying English full-time; 5 hrs per wk; special fee)

Practice in speaking in structured and semi-structured situations with special attention to a limited set of language functions; emphasizes basic regularities of pronunciation.

0114. LOWER INTERMEDIATE LISTENING COMPREHENSION. (No cr; prereq Δ ; for students studying English full-time; 5 hrs per wk; special fee)

Practice in understanding samples of spoken English of limited length and complexity to prepare students to understand segments of natural conversation on a variety of topics; basic note-taking skills; special attention to the variety of phonetic shapes words can have.

0121. UPPER INTERMEDIATE GRAMMAR.

(No cr; prereq Δ ; for students whose level of English proficiency may allow them to take 1 academic class; 5 hrs per wk; special fee)

Reviews and adds to repertoire of structures with attention to meaning, use, and form; emphasizes verb phrase and control of grammar in writing.

0122. UPPER INTERMEDIATE READING AND COMPOSITION. (No cr; prereq Δ ; for students whose English proficiency may allow them to take one academic class; 10 hrs per wk; special fee)

Reading unadapted and adapted passages. Emphasis on efficiency, vocabulary, drawing inferences, recognizing paraphrase, identifying point of view, using knowledge of organization to aid understanding. Writing process (planning, writing, rewriting, editing), academic-style, writing in response to reading.

0123. UPPER INTERMEDIATE SPEAKING/ PRONUNCIATION. (No cr; prereq Δ ; for students whose level of English proficiency may allow them to take 1 academic class; 5 hrs per wk; special fee)

Develops fluency and accuracy and adds to repertoire of language for specific functions and situations; special attention to communication strategies—developing ways to communicate when pronunciation or vocabulary limitations make communication difficult; pronunciation work emphasizes stress and intonation and problems of individual students.

0124. UPPER INTERMEDIATE LISTENING COMPREHENSION. (No cr; prereq Δ ; for students whose level of English proficiency may allow them to take 1 academic class; 5 hrs per wk; special fee)

Prepares students for academic lectures by introducing standard forms of organization and common transition signals used in American lectures; emphasizes understanding natural conversation.

0130. ADVANCED COMPOSITION. (No cr; prereq Δ ; for students whose level of English proficiency may allow them to take 1-3 academic classes; 5 hrs per wk; special fee)

Skills needed at every stage of the writing process; finding a topic, determining an approach to the topic, planning and drafting a composition, revising, and editing; suiting one's writing to audience and topic and looking at one's own writing critically.

0131. ADVANCED GRAMMAR. (No cr; prereq Δ ;

for students whose level of English proficiency may allow them to take 1-3 academic classes; 5 hrs per wk; special fee)

Emphasizes form, meaning, use of complex structures, and increased control over basic structures.

0132. ADVANCED READING AND COMPOSITION. (No cr; prereq Δ ; for students whose English proficiency may allow them to take from one to three academic classes; 10 hrs per wk; special fee)

Understanding academic and challenging non-academic material. Reading efficiently, recognizing tone, distinguishing fact from opinion. Vocabulary skill-building. Academic writing process, from gathering material through editing. Reading as means to improve writing content and form.

0133. ADVANCED SPEAKING/PRONUNCIATION.

(No cr; prereq Δ; for students whose level of English proficiency may allow them to take 1-3 academic classes; 5 hrs per wk; special fee)
Spoken English in academic settings as well as in daily conversation; pronunciation focuses on individual needs of students.

0134. ADVANCE LISTENING COMPREHENSION.

(No cr; prereq Δ; for students whose level of English proficiency may allow them to take 1-3 academic classes; 5 hrs per wk; special fee)
Lecture comprehension, with special attention to notetaking, recognizing main ideas and support, and determining the attitude of the speaker toward the subject; comprehension of complex information presented in a nonlecture format, as in television documentaries.

0135. ADVANCED READING. (No cr; prereq Δ; for students whose level of English proficiency may allow them to take 1-3 academic classes; 5 hrs per wk; special fee)

Reading for academic purposes; comprehension of scholarly reading selections as well as challenging non-academic material; reading efficiently; recognizing tone and distinguishing fact from opinion; vocabulary work focuses on skill-building as well as specific words.

0136. INTERNATIONAL BUSINESS ENGLISH.

(No cr; prereq Δ; for students whose level of English proficiency may allow them to take 1-3 academic classes; 5 hrs per wk; special fee)
Reading, listening, speaking, and writing activities based on business topics and academic texts.

0137. ENGLISH FOR SCIENCE AND TECHNOLOGY.

(No cr; prereq Δ; for students whose level of English proficiency may allow them to take 1-3 academic classes; 5 hrs per wk; special fee)
English for formulating hypotheses, describing experiments, and presenting results; includes reading, writing, listening, and speaking activities based on scientific and technical topics.

0138. ENGLISH FOR CURRENT EVENTS.

(No cr; prereq Δ; for students whose level of English proficiency may allow them to take 1-3 academic classes; 5 hrs per wk; special fee)
Skills necessary to understand news media as means of English improvement and as a source of information and entertainment; course content based on major international news events of the day, using radio broadcasts, the daily newspaper, and other sources.

0139. LISTENING AND SPEAKING THROUGH FILM.

(No cr; prereq Δ; for students whose level of English proficiency may allow them to take 1-3 academic classes; 5 hrs per wk; special fee)
Focuses on developing listening and speaking skills and cultural understanding using American movies and television.

0140. ADVANCED VOCABULARY AND ACADEMIC SKILLS.

(No cr; prereq Δ; for students whose level of English proficiency may allow them to take 1-3 academic classes; 5 hrs per wk; special fee)
Strategies for success in academic classes, including vocabulary development, lecture comprehension, and textbook reading; application of listening skills at lectures in courses such as Human Geography and Introduction to Psychology, and the reading of supporting unadapted material.

0141. ENGLISH THROUGH LITERATURE.

(No cr; prereq Δ; for students whose English proficiency may allow them to take from one to three academic classes; 5 hrs per wk; special fee)
Includes reading and telling of folktales, plays, short stories, and poetry. Focuses on developing reading comprehension and discussion skills, vocabulary, and written expression.

Center for European Studies

Staff—Director, William I. Brustein, 309 Social Sciences Building (612/625-1557)

The Western European Area Studies minor is offered by the Center for European Studies, which serves as a curricular and research service unit for faculty in the humanities, the social sciences, and the professional schools. Descriptions of the courses required for the minor are found in this section of the bulletin under the individual departmental listings.

Study Abroad—Students are encouraged to take advantage of one or more of the many opportunities for study in Western Europe. Appropriate credits from such study can be easily applied toward the minor. See also Foreign Study.

Minor Sequence

Minor Requirements—Completion of the CLA language requirement in a Western European language; a total of 24 cr from among the approved courses (see center for a full listing) within one of two tracks:

1. General track: Pol 5461; Geog 3161 or 5171; and four other courses, at least two of which are in the humanities
2. Topical track: 24 cr of 3xxx-5xxx courses chosen around a topic selected in consultation with the center director

Major Requirements and Course Descriptions

All courses must be taken A-F and only 4 cr may be from directed study or directed research. The minor program includes courses from a minimum of three different departments (excluding language courses).

The minor program must be approved by the center director.

Film Studies

Staff—*Chair of Film Studies Committee*, Rob Silberman (Art History), 12 Jones Hall

Film Studies Committee: Conley (French and Italian), McCormick (German), Mishler (Scandinavian Studies), Schwartz (Journalism and Mass Communication)

Film studies offers students the opportunity to examine film from aesthetic, historical, political, social, technical, and theoretical perspectives.

B.A. Major Sequence

Required Preparatory Course—ArtH/CLit 1921

Major Requirements—ArtH 3921-3922, CLit 5221, Jour 5615, and eight additional 4 cr courses at the 3xxx or 5xxx level selected from approved electives, including one director course, one genre course, and one national cinema course. The eight courses must include at least one course at the 5xxx level and one at the 3xxx level designated as a junior-senior film studies seminar. The major paper will be written in conjunction with the seminar. The major program must be approved by a member of the film studies committee.

Minor Sequence

Required Preparatory Course—ArtH/CLit 1921

Minor Requirements—ArtH 3921-3922, CLit 5221, Jour 5615, and two additional 3xxx or 5xxx courses selected from approved electives. The minor program must be approved by a member of the film studies committee.

Finnish

See Scandinavian Languages and Literature.

Foreign Study (FoSt)

Coordinator, Chip Peterson, 104 Nicholson Hall (612/624-4525)

You can earn academic credit applicable toward a University degree, or toward a minor in foreign study, for many different types of study abroad. Some programs carry University residence credit, but you also are encouraged to consider non-University options before choosing a particular experience.

Advising—Two offices play major roles in study abroad advising. For help in gaining an understanding of your options and selecting a study abroad opportunity, request an appointment at the International Study and Travel Center (ISTC), 102 Nicholson Hall (612/625-1150), and consult the University of Minnesota Study Abroad Catalog and the large collection of brochures and catalogs available in the ISTC library. After going to ISTC, seek advice concerning academic aspects of study abroad (e.g., obtaining credit, relating foreign study to your University program of study, or completing a foreign studies minor). Request an appointment at the Foreign Studies Program office, 104 Nicholson Hall (612/624-4525), and consult the appropriate academic department. You are encouraged to plan your experience as far in advance as possible to avoid problems in meeting application deadlines, financial aid timetables, and pre-departure course requirements.

Minor Sequence

Minor Requirements—Minimum of 10 weeks of study for academic credit in a foreign country

Spch 3451 (before departure) and 3452 (after return)

23 cr (majority before departure) in a foreign language appropriate to the country of study

15 3xxx or 5xxx cr in coursework focusing on the country of study. At least one

(preferably two) course must be taken before departure and one after you return. At least one course must be in the humanities (e.g., literature, art history), at least one in history, and at least one in the social sciences (e.g., geography, political science).

The foreign studies minor helps students integrate their study abroad with supporting University coursework. Because several of the required courses must be taken before departure, careful advance planning is essential. A more detailed explanation of requirements, guidance concerning course selection, and minor application forms are available in the Foreign Studies Program office.

Study Abroad Options

The study abroad opportunities available to CLA students are many and varied. The college's particular emphasis for lower division students is on Short-Term Intensive Language Programs, and for upper division students, on Integrated Classroom Study in Foreign Universities and on Academic Field Study Abroad. Options are not limited to these three categories, however. An intermediate set of options is listed under Area Studies and Theme Programs. The programs listed below yield CLA residence credit except the exchanges, for which transfer credit is used, and most student financial aid can be applied to them. Some of the programs are operated by the University of Minnesota, particularly through its Global Campus office, 106 Nicholson (612/625-3379), and others by consortia to which the University belongs, including the Committee on Institutional Cooperation (CIC), the Council on International Educational Exchange (CIEE), the Higher Education Consortium for Urban Affairs (HECUA), and the Institute of European and Asian Studies (IES/IAS).

To receive the comprehensive University of Minnesota Study Abroad Catalog, call 612/625-3379.

Short-Term Intensive Language Programs

The following programs develop or improve language skills substantially during a quarter or summer abroad. They emphasize first-, second-, and/or third-year language instruction, often supplemented by one or two courses about the host country. Students are encouraged to view them as stepping stones toward additional study abroad later in their undergraduate career. Coursework in such programs may be applied toward the CLA language requirement.

SUMMER INTENSIVE CHINESE LANGUAGE INSTITUTE. (5-15 cr; prereq Δ)

Eight weeks' summer study of second- or third-year or advanced Chinese at Nankai University, Tianjin, People's Republic of China. Optional tour following institute. Possibility of continuing study during academic year, subject to Nankai approval.

CIEE SEMESTER PROGRAMS IN RUSSIA.

(1-27 cr; prereq Δ)

Fall or spring semester at St. Petersburg University under auspices of CIEE. Intensive language study supplemented by lecture series on Russia, local excursions, and field trip to other regions. Instruction by Russian faculty.

POLISH IN LUBLIN. (15 cr; prereq Δ)

Eight-week summer intensive language program at Maria Curie-Skłodowska University sponsored by the CIC and administered by the University of Minnesota's Global Campus. Beginning Polish supplemented by culture lectures and excursions.

GERMAN AND AUSTRIAN STUDIES IN GRAZ.

(12-14 cr; prereq Δ)

Winter and/or spring quarter in Graz, Austria, cosponsored by Department of German, Center for Austrian Studies, and Global Campus; led by University of Minnesota faculty. Intensive language instruction, culture courses, field trips, home stay experience. Internships and research opportunities also available.

FRENCH IN MONTPELLIER. (12-16 cr; prereq Δ)

Fall only or winter and/or spring quarters in France, cosponsored by Department of French and Italian and Global Campus. Intensive language instruction, culture courses, field trips, home stay experience.

CIC SUMMER PROGRAM IN QUEBEC. (1-10 cr; prereq Δ)

Six-week summer intensive French language program at Laval University, Quebec City, Canada, under auspices of CIC. Language courses at any of seven levels, supplemented at upper levels by Quebec studies courses taught in French. One year's prior college French or equivalent required.

Major Requirements and Course Descriptions

SPANISH IN CUERNAVACA. (14-15 cr; prereq Δ)
Fall, winter, and/or spring quarters in Cuernavaca, Mexico, cosponsored by Department of Spanish and Portuguese and Global Campus; led by University of Minnesota faculty. Intensive language instruction at the beginning or intermediate level, culture study, and field trips, home stay experience. Class size of 2-5 students each.

SPANISH IN VENEZUELA. (12-14 cr; prereq Δ)
Winter quarter in Mérida, in the Venezuelan Andes, cosponsored by Department of Spanish and Portuguese and Global Campus. Language, culture, and history of Latin America for intermediate to advanced language students. Instruction in Spanish by Venezuelan faculty. Home stay experience.

CIEE LANGUAGE AND AREA STUDIES PROGRAM IN ALICANTE, SPAIN. (1-27 cr; prereq Δ)
Semester at University of Alicante under auspices of CIEE. Intensive beginning or intermediate Spanish plus two area studies courses taught in English. Instruction by Alicante faculty.

Integrated Classroom Study in Foreign Institutions

The following programs, mostly for juniors and seniors with strong academic records, permit students to take regular courses for a year in any of a hundred foreign universities. Some also allow semester study. A few supplement integrated study with a pre-session orientation or with program-taught courses concurrent with the regular university courses. Often coursework from such programs can be applied toward CLA majors and minors. Strong language skills are needed for those universities whose language of instruction is not English. Because of the wide variety of options, most students will be able to find a university appropriate to their particular language/discipline combination.

Many of the opportunities for such study are through exchanges such as the International Student Exchange Program (ISEP), which permits students to pay University of Minnesota room, board, and tuition to study in a foreign university (partial airfare scholarships available for non-Western European destinations). A number of bilateral exchanges function the same way and at similar costs. Others are part of the scholarship-supported International Reciprocal Student Exchange Program (IRSEP). Selected stu-

dents pay only airfare and incidental expenses but are obligated to contribute work to the program's administration in the Twin Cities during the year following their study abroad.

EXCHANGES IN AFRICA. (1-54 transfer cr; prereq Δ)
Academic year's study in regular classes, in some cases with semester options, through IRSEP at the Bourghiba Institute in Tunisia (language study only) and the University of Dar es Salaam in Tanzania; and through ISEP at universities in Ivory Coast, Kenya, Tanzania, Togo, Zambia.

IRSEP/ISEP EXCHANGES IN EAST/SOUTHEAST ASIA AND OCEANIA. (1-54 transfer cr; prereq Δ)
Academic year's study in regular classes, in some cases with semester options, through IRSEP at Nankai University in China and the Universiti Sains Malaysia; through ISEP in Australia, Fiji, Hong Kong, Korea, Philippines, and Thailand; and through bilateral exchange with Sophia University, Tokyo.

IES PROGRAM AT THE UNIVERSITY OF SINGAPORE. (1-45 cr; prereq #)
Academic year or fall semester study in regular courses at National University of Singapore or Nanyang Technological University under auspices of IES/IAS. Instruction in English. Wide variety of disciplines available. Emphasis on Asian studies, business/economics. Special option is full-time intensive Chinese language program at all levels.

IAS PROGRAMS IN AUSTRALIA. (1-54 cr; prereq Δ)
Semester or year study in regular courses at Australian National University, Canberra, or at the University of Adelaide, under auspices of IES/IAS. Course offerings in natural sciences, social sciences, and humanities.

CIEE PROGRAM AT MURDOCH UNIVERSITY, PERTH, AUSTRALIA. (1-54 cr; prereq Δ)
Semester or year of study in regular courses at Murdoch University, Perth, Western Australia under auspices of CIEE. Students may choose from courses in natural sciences, social sciences, and humanities. All participants take CIEE course entitled Australia in its Asian Context.

EXCHANGES IN THE AMERICAS. (1-54 transfer cr; prereq Δ)
Academic year's study in regular classes, in some cases with semester options, through IRSEP at Uruguay's Universidad de la Republica; and through ISEP at universities in Argentina, Brazil, Canada, Colombia, Costa Rica, Dominican Republic, Honduras, Mexico, Uruguay.

CIEE INTERUNIVERSITY STUDY PROGRAM IN SAO PAULO, BRAZIL. (1-66 cr; prereq Δ)

Calendar year's study, June to June, at Universidade de São Paulo, Brazil, including six-week pre-session and two semesters under auspices of CIEE. Instruction in Portuguese. All students take Portuguese language, Contemporary Brazil, and regular USP courses.

CIEE DOMINICAN REPUBLIC LANGUAGE/ CARIBBEAN STUDIES PROGRAM. (1-27 cr; prereq Δ)

Fall or spring semester at Universidad Católica Madre y Maestra, Santiago, Dominican Republic, under auspices of CIEE. Students take regular UCMM courses plus special program courses, all in Spanish. Focus: Caribbean studies and advanced Spanish language. Course options also include an internship in community development or social services.

KANSAS PROGRAM IN COSTA RICA. (1-54 cr; prereq Δ)

Semester or year study in regular classes at Universidad de Costa Rica under University of Kansas auspices, preceded by month of on-site orientation. Students may choose among wide range of courses in natural sciences, social sciences, humanities.

EXCHANGES IN EUROPE. (1-54 transfer cr; prereq Δ)

Academic year's study through IRSEP in Hungary, Iceland, Norway, and Germany; through ISEP in Austria, Belgium, Bulgaria, Cyprus, Finland, France, Germany, Hungary, Italy, Malta, Netherlands, Spain, Sweden, Switzerland, and the United Kingdom; and through bilateral exchanges in Austria (Karl Franz University in Graz), Netherlands (University of Amsterdam and Catholic University of Nijmegen), and United Kingdom (Universities of Essex and Lancaster).

CIEE ACADEMIC YEAR PROGRAM IN ST. PETERSBURG. (1-54 cr; prereq Δ)

Academic year at St. Petersburg University under auspices of CIEE. Intensive advanced Russian language study plus regular university courses; local excursions and field trip to other regions. Instruction by Russian faculty.

BOLOGNA COOPERATIVE STUDIES PROGRAM, ITALY. (1-54 cr; prereq Δ)

Academic year's study in broad range of disciplines at University of Bologna, Italy, partly in regular courses and partly in special program-sponsored courses, preceded by six-week orientation program to improve Italian language skills and general cultural knowledge. All instruction in Italian by Bologna faculty.

IES PROGRAM IN FREIBURG, GERMANY. (1-54 cr; prereq Δ)

Semester or year study at University of Freiburg, in regular university courses and/or courses in German studies offered by IES/IAS. All instruction is in German by Freiburg faculty. Tutorials available in some fields.

ACADEMIC YEAR IN MONTPELLIER. (36-45 cr; prereq Δ)

Academic year's study in Montpellier, France, cosponsored by Department of French and Italian and Global Campus. Students attend intensive language program in September in preparation for regular classes, supplemented by special courses, at Université Paul Valéry. Variety of disciplines. All instruction in French by French faculty. Home stay experience.

IES LONDON UNIVERSITY AND FINE ARTS PROGRAM. (1-54 cr; prereq Δ)

Academic year's study, under auspices of IES/IAS, in regular courses at any of seven London institutions: School of Oriental and African Studies, Slade School of Fine Arts, Courtauld Institute of Art History, Royal College of Music, London School of Economics, London Academy of Music and Dramatic Arts, or City University, London.

IES PROGRAM IN DURHAM, ENGLAND.

(1-45 cr; prereq Δ)

Year's study in regular classes at University of Durham under IES/IAS sponsorship. Students may choose among wide range of courses in natural sciences, social sciences, humanities.

Academic Field Study Programs

A number of programs make extensive use of structured field study in conjunction with preparatory and/or overseas classroom work. The Student Project for Amity among Nations (SPAN) provides opportunities for undergraduate or graduate research projects, Minnesota Studies in International Development (MSID) for development-related internships in the Third World, and HECUA and Global Campus for intensive individual and group field study integrated with overseas classroom study.

ARCHITECTURE IN EUROPE OR CHINA.

(12-14 cr; prereq Δ)

Spring quarter in Europe or China, cosponsored by Department of Architecture and Global Campus; led by University of Minnesota faculty. Field study in analytical and architectural design. Winter quarter planning seminar required. Graduate credit available.

CIEE TROPICAL BIOLOGY AND CONSERVATION PROGRAM IN COSTA RICA. (1-10 cr; prereq Δ)

Seven-week summer program in tropical biology, under auspices of CIEE. Based at Monteverde Institute, located in a cloud forest in northwestern Costa Rica. Core course in tropical biology (taught in English), Spanish language instruction, and field research project.

Major Requirements and Course Descriptions

HECUA SOUTH AMERICAN URBAN SEMESTER. (1-24 cr; prereq Δ)

Study of urbanization and development problems, plus Colombian studies and independent study project. Based in Bogotá, Colombia, with field trips to cities in Colombia and other countries. Lectures, readings, discussions, structured field experiences. Fall semester.

HECUA LITERATURE, IDEOLOGY, AND SOCIETY IN LATIN AMERICA. (1-24 cr; prereq Δ)

Literary, artistic perspectives on ideology, social change. Based in Bogotá, Colombia. Field study in Puerto Rico and either Guatemala or Ecuador permits comparative approach. Lectures, readings, discussion—mainly in Spanish—integrated with structured fieldwork. Coursework includes advanced Spanish or, by permission, research project. Spring semester.

HECUA SCANDINAVIAN URBAN STUDIES TERM. (1-24 cr; prereq Δ)

Introduction to contemporary Scandinavian societies using the city as field site and analytical unit. Based in Oslo, Norway. Field trips to Norwegian towns, Scandinavian capitals. Lectures, readings, discussions, structured fieldwork. Courses include independent study and introduction to Norwegian language and culture.

CIEE PARIS INTERNSHIP AND STUDY PROGRAM. (1-24 cr; prereq Δ)

Fall or spring semester in Paris, France, under auspices of CIEE. Classroom courses in advanced French and contemporary France plus 24- to 28-hour per week internship with a French corporation or nonprofit agency. Students from all disciplines eligible. French fluency required.

Minnesota Studies in International Development (MSID)—*Administrative Official*, David Biesboer, 220 Bio Sci; *Coordinator*, Gerald A. McIntosh, 106 Nicholson Hall (612/625-9383)

MSID is an all-University program that places students in development-related internships with institutions in Third World countries. Before departure, participants take two required fall quarter courses and work with University faculty to develop a contract for crediting overseas academic work related to the internship. Internship is with a development agency or a research program or both.

MSID ECUADOR INTERNSHIP. (1-12 cr per qtr; prereq Δ)

Five-month internship beginning in January. Interns work with Ecuadorian nongovernmental development agencies in Quito or nearby sites in Ecuador. Lodging with Ecuadorian families. Spanish required.

MSID INDIA INTERNSHIP. (1-12 cr per qtr; prereq Δ)

Five-month internship beginning in January. Interns work and study at University of Pune, in Pune, Maharashtra, India. Introductory knowledge of Maharathi can be gained in fall before departure. Housing arranged by MSID; home stays encouraged.

MSID JAMAICA INTERNSHIP. (1-12 cr per qtr; prereq Δ)

Five-month internship beginning in January. Interns work in wide variety of agencies in various parts of Jamaica. Internships and housing arranged by the Social Development Commission.

MSID KENYA INTERNSHIP. (1-12 cr per qtr; prereq Δ)

Five-month internship beginning in January. Interns work in rural or urban development programs of the Mazingira Institute. Housing with families or, in Nairobi, at the YMCA. Swahili desirable but not required.

MSID MOROCCO INTERNSHIP. (1-12 cr per qtr; prereq Δ)

Five-month internship beginning in January. Interns work with international or host-country agencies in various parts of Morocco. Home stays arranged by MSID's Moroccan coordinator. French or Arabic required. Moroccan Arabic taught in country.

MSID SENEGAL INTERNSHIP. (1-12 cr per qtr; prereq Δ)

Six-month internship beginning in January. Interns work with ENDA-TM, a Senegalese agency that engages directly in projects and research of benefit to poor people. Housing with families or, in Dakar, in a house available to MSID. French required.

SPAN Program—*Administrative Official*, Theofanis Stavrou, *Coordinator*, Laura Holmstrand, 107 Nicholson Hall (612/626-1083)

The Student Project for Amity among Nations (SPAN) program involves intensive advance study of a foreign culture (including language when appropriate), a summer abroad to gather information on an individual project, and completion of a research project upon return to the campus. Four different countries are chosen for each year's program. For each site, a faculty adviser directs the year of predeparture preparation, provides on-site guidance to the students while in the foreign country, and supervises the post-return project.

FSSP 5960. PREPARATORY SEMINAR FOR SPAN OVERSEAS RESEARCH. (6 cr; prereq admission to SPAN program 1 yr before summer abroad) Academic-year seminar preceding the SPAN summer abroad. Intensive study of the culture and society to be visited, intercultural communication training, and development of the research project. Usually meets on Saturdays. Credit not granted until completion of 5970.

FSSP 5970. SPAN OVERSEAS RESEARCH PROJECT. (6 cr; prereq 5960) Summer directed field study in selected foreign countries under the guidance of a SPAN faculty adviser accompanying each country group. Each student completes a comprehensive research project upon return.

Area Studies and Theme Programs

In addition to the above three categories, a number of other programs also grant CLA residence credit. Most of the following offer a broad area studies/language curriculum, many of them with an option also of taking integrated courses in a cooperating host-country university. Others are more specialized (international business in Seville/Tokyo/Dijon/Copenhagen, literature/theater in London, architecture/design/landscape architecture in Copenhagen, European Community in Freiburg). Participants' classmates in most or all courses are other Americans. The Toledo program, with substantial numbers of Latin American students, is an exception.

Programs Taught in a Language Other than English—Instruction in the following programs is entirely or almost entirely in a language other than English. Eligibility requirements generally include at least five or six quarters of language study or equivalent knowledge.

IES PROGRAM IN BERLIN. (1-54 cr; prereq Δ) Semester or academic year in Berlin, Germany, under auspices of IES/IAS. Advanced German plus area studies courses in social sciences and humanities. All instruction in German by German faculty.

IES PROGRAM IN NANTES, FRANCE. (1-54 cr; prereq Δ) Semester or year study in Nantes. IES/IAS courses supplemented by opportunities to take regular University of Nantes courses. Wide range of course offerings emphasize French language, literature, and area studies. Some internships available. Six-week summer program with more limited curriculum.

IES PROGRAM IN PARIS. (1-54 cr; prereq Δ) Semester or year study in courses offered by IES/IAS. Curriculum includes French language and literature, history, political science, economics, and art history. Opportunities to take regular courses at Paris universities. Some internships available. Six-week summer program with more limited curriculum.

CIEE LANGUAGE AND CULTURE PROGRAM IN RENNES, BRITTANY, FRANCE. (1-54 cr; prereq Δ) Semester study of French language, literature, civilization at University of Haute Bretagne, Rennes, under auspices of CIEE. Instruction in French by French faculty. Students with advanced language skills may also take regular university courses.

CIEE CRITICAL STUDIES PROGRAM IN PARIS. (1-54 cr; prereq Δ) Semester or year at University of Paris III, under auspices of CIEE. Theoretical trends in French critical thought concerning literature, philosophy, film analysis, and art history. Instruction in French by faculty from Paris universities. Students with advanced language skills may also take regular courses in Paris universities.

CIC SUMMER PROGRAM IN GUANAJUATO, MEXICO. (1-15 cr; prereq Δ) Eight-week summer language and area studies program in Guanajuato, Mexico, sponsored by the CIC. Instruction in Spanish by University of Guanajuato faculty. Advanced Spanish, Mexican, and Latin American studies courses in history, civilization/culture, and literature.

IES PROGRAM IN MADRID. (1-54 cr; prereq Δ) Semester or year study in courses offered by IES/IAS. Curriculum includes Spanish language and literature, history, and social science studies. Opportunities to take regular University of Madrid courses. Six-week summer program with more limited curriculum.

IES PROGRAM IN SALAMANCA, SPAIN. (1-54 cr; prereq Δ) Semester or year study in Salamanca, Spain, under auspices of IES/IAS. Students may select IES courses (area studies, advanced Spanish language), University of Salamanca courses (variety of social science, humanities, and natural science disciplines), or combination of both.

CIEE LANGUAGE/SOCIETY AND LIBERAL ARTS PROGRAMS IN SEVILLE, SPAIN. (1-54 cr; prereq Δ) Semester or year in Seville under auspices of CIEE. Instruction in Spanish by Spanish faculty. Two separate tracks. Language and Society program (semester only) at Universidad Internacional Menéndez y Pelayo emphasizes language instruction supplemented by one or two area studies courses. Liberal Arts program (semester or year) at University of Seville offers broader language/area studies curriculum and permits students with advanced language skills to take regular university courses. Split-year options permit fall semester in one program and spring in another, including Alicante or Seville Business/Society.

Major Requirements and Course Descriptions

CIEE BUSINESS AND SOCIETY PROGRAM IN SEVILLE, SPAIN. (1-27 cr; prereq Δ)

Semester at University of Seville under auspices of CIEE. Spanish business practices in cultural context. Courses in economics, finance, business, marketing history, and advanced language. Extensive use of visits to Spanish corporations. Instruction in Spanish by Seville faculty.

Toledo International Program—

Administrative Official, Antonio Ramos-Gascon, 31 Folwell Hall; *Coordinator*, Holly Zimmerman, 106 Nicholson Hall (612/625-9888)

The Toledo program offers a broad curriculum of courses on both Spain and Latin America to undergraduate and graduate students from throughout the Americas and other parts of the world. It is jointly sponsored by the University of Minnesota and the José Ortega y Gasset Foundation, a research institution in the humanities and social sciences. Courses are taught in Spanish, but intermediate language classes also are offered. Faculty comes from Spanish universities. CLA residence credit available through extension classes.

TOLEDO INTERNATIONAL PROGRAM. (1-54 cr; prereq Δ)

Semester, year, or summer study in Toledo, Spain. Includes scores of courses in anthropology/archaeology, art history, economics, geography, history, linguistics, literature, political science, and Spanish. Each has received CLA approval and been assigned a CLA course number. All are listed individually in the Toledo program bulletin. Contact the coordinator.

Programs Taught in English—Most or all instruction in the following programs is in English, except that those in non-English speaking countries also include language courses.

CHINESE UNIVERSITIES EXCHANGE PROGRAM (CUEP). (15-25 cr; prereq Δ)

Bilateral exchanges permitting academic year study in courses for foreigners at any of three Chinese universities: Peking University (Beijing), Fudan University (Shanghai), Nankai University (Tianjin). Emphasis on Mandarin Chinese language study and directed study projects. Students with advanced language skills may take regular university courses in other disciplines.

IAS PROGRAM IN BEIJING, CHINA. (1-54 cr; prereq Δ)

Semester or year study at Beijing Foreign Studies University under auspices of IES/IAS. Each semester's program consists of intensive intermediate or advanced Chinese language study plus two courses in English on Chinese culture and society. One year's prior Chinese language study required.

IAS PROGRAM IN TAIPEI, TAIWAN. (1-54 cr; prereq Δ)

Semester or year study at Fu Jen University, suburban Taipei, under auspices of IES/IAS. Each semester's program consists of intensive Chinese language study at any appropriate level plus area studies and topics courses in English on various aspects of Chinese culture and society. One year's prior Chinese language study required.

IES PROGRAM AT NANZAN UNIVERSITY, JAPAN. (1-45 cr; prereq Δ)

Semester or year study at Center for Japanese Studies, Nanzan University, Nagoya. Sponsored by IES/IAS. Japanese language instruction at all levels. Courses on Japan, taught in English, in many disciplines from social sciences, humanities, and traditional arts.

CIEE BUSINESS AND SOCIETY PROGRAM IN TOKYO, JAPAN. (1-36 cr; prereq Δ)

Semester, summer, or spring/summer combination in Tokyo under auspices of CIEE. Japanese business practices in cultural context. Courses on Japanese language, economy, business, society, and culture. Visits to Japanese corporations. Instruction in English by Japanese faculty.

IAS PROGRAM AT TOKYO INTERNATIONAL UNIVERSITY. (1-54 cr; prereq Δ)

Semester or year study at Tokyo International University, suburban Tokyo, under auspices of IES/IAS. Japanese language plus area studies courses in English. Emphasizes Japanese economy, business practices, history, and government.

IAS SOUTHEAST ASIA PROGRAM. (1-24 cr; prereq Δ)

Semester study of Southeast Asian society, culture, economy, and politics under sponsorship of IES/IAS. Seven weeks in Singapore, seven in a second country (Thailand fall, Indonesia spring). Includes required language course (Thai fall, Bahasa Indonesia spring).

CIEE AREA STUDIES PROGRAM IN PRAGUE, CZECHOSLOVAKIA. (1-27 cr; prereq Δ)

Fall or spring semester at Charles University, Prague, Czechoslovakia, under auspices of CIEE. Each student takes a Czech language course plus area studies courses taught in English by Czech and Slovak faculty under supervision of a CIEE resident director.

CIEE AREA STUDIES PROGRAM IN BUDAPEST, HUNGARY. (1-27 cr; prereq Δ)

Fall or spring semester at Budapest University of Economics, Budapest, Hungary, under auspices of CIEE. Each student takes Hungarian language course plus area studies courses taught in English by Hungarian faculty under supervision of CIEE resident director.

CIEE AREA STUDIES PROGRAM IN WARSAW, POLAND. (1-27 cr; prereq Δ)

Fall or spring semester at Warsaw School of Economics, Warsaw, Poland, under auspices of CIEE. Each student takes a Polish language course plus area studies courses taught in English by Polish faculty under supervision of CIEE resident director.

DENMARK'S INTERNATIONAL STUDY PROGRAM. (1-54 cr; prereq Δ)

Semester, year, or summer of study in Copenhagen. Curricula offered: liberal arts, architecture and design, international business and economics, summer programs in architecture/design and liberal arts/international business. All three tracks offer Danish language courses. Instruction in English by Danish faculty, mostly from University of Copenhagen.

IES PROGRAM IN MILAN, ITALY. (1-54 cr; prereq Δ)

Academic year or fall semester study in Milan, Italy, under auspices of IES/IAS and Catholic University of Milan. Italian language at all levels, plus area studies courses in English or Italian depending on student's level of language preparation. Students with advanced Italian skills may also take regular university courses.

IES PROGRAM IN VIENNA. (1-54 cr; prereq Δ)

Semester or year study in English at Vienna Center of IES/IAS. Curriculum emphasizes arts, Eastern Europe and East-West studies, business/economics, and required intensive German instruction. Advanced students of German also may take University of Vienna courses. Some internships available. Six-week summer program with more limited curriculum.

IES EUROPEAN COMMUNITY PROGRAM IN FREIBURG. (1-27 cr; prereq Δ)

Semester study in English at IES/IAS Freiburg Center. Focuses primarily on economics and politics of contemporary Europe and EC. Related visits to EC and enterprises affected by EC policies. All students also study German language.

IES INTERNATIONAL BUSINESS MANAGEMENT PROGRAM IN DIJON, FRANCE. (1-27 cr; prereq Δ)

Semester in Dijon, France, through IES/IAS. Focus is international business; all students also take French language and history. Instruction in English by French faculty. Linguistically qualified students may also take regular business courses at École Supérieure de Commerce de Dijon or do a post-program internship.

LITERATURE/THEATRE IN LONDON. (12-16 cr; prereq Δ)

Spring quarter in London, England, cosponsored by Department of English, Department of Theatre Arts and Dance, and Global Campus; led by University of Minnesota faculty. Study of English literature and theatre in historical, geographical, and cultural context. Open to students from all disciplines. Theatre internships and graduate credit available.

IES PROGRAM IN LONDON. (1-54 cr; prereq Δ)

Semester or year study at IES/IAS London Center. Students choose between two tracks: social sciences or humanities; both involve a tutorial. Option of substituting one regular course-tutorial combination in a London university for two IES courses. Internships available. Six-week summer program offers with limited curriculum.

Individualized Study Abroad

You may earn credit for study abroad outside the auspices of University programs through several different mechanisms (consult the Foreign Studies Program for details):

1. Participation in a study abroad program sponsored by an accredited American college or university usually is accepted for transfer credit by submitting a transcript.
2. Study at an accredited foreign university, whether as a regular student or in a special program for foreigners, similarly can earn transfer credit. The Office of Admissions usually requests evaluation of course materials by a consultant in an appropriate academic department.
3. Study at a foreign institution from which credit is not accepted for transfer (such as a language institute) can earn credit through special examinations offered by appropriate University academic departments.
4. Directed study options are also available. These require approval of and evaluation by an appropriate University faculty member and should be arranged before departure for study abroad.

All students who select a program of individualized study should complete a Foreign Study Checklist, available from the Foreign Studies office, and submit it to a foreign studies adviser. This checklist records planning, preparation, and agreements with appropriate instructors in order

Major Requirements and Course Descriptions

to ensure that students' expectations regarding credit are realistic. Students can maintain their status in the University while abroad by registering for FoSt 0010, or if they wish to continue receiving or to defer student financial aid by registering for FoSt 3000. For more information, Contact ISTC or the Foreign Studies Program.

0010. STUDY ABROAD. (0 cr; prereq Δ)

This no-credit registration allows students to maintain their University of Minnesota status while studying abroad.

3000. STUDY ABROAD. (1-15 cr per qtr; prereq Δ)

Temporary registration used by students who are studying abroad for post-return transfer credit or credit by exam and who are eligible for student financial aid or loan deferments.

French and Italian

Staff—Chair, Maria Paganini, 260A Folwell Hall; *Director of Undergraduate Studies,* Peter Robinson, 236 Folwell Hall; *Director of Graduate Studies,* Judith Preckshot, 135 Folwell Hall

Professors: Akehurst, Conley, Noakes, Paganini, Schneider, Waldauer

Associate Professors: Barnes, Brewer, Martinez, Preckshot, Robinson, Sivert

Assistant Professor: Wieland

The study of French embraces the French language, the culture and literature of French-speaking countries, and the interrelationships among these phenomena.

Italian studies focus on the language of Italy as well as the country's literature, from the early love sonnets to contemporary works. A broad cultural framework is provided through courses on civilization, literary tradition, and cross-disciplinary studies.

Accelerated Sections—Accelerated sections in the Fren and Ital 1101-1102-1103-1104-1105 sequences allow highly motivated and qualified students to complete the background requirements and enter advanced courses more rapidly than the usual schedule. Fren 1102-1103 is offered winter quarter and 1104-1105 spring quarter.

General Education—Fren 3599, 3601, 3602, 3603, 3606, 3607, and 3650 are open to all undergraduates, have no prerequisites, and may be applied toward the Route II language requirement.

Nonspecialist students may profit from the group of Italian literature and civilization courses offered in English (Ital 5411, 5418, 5559, 5601, 5602, 5603, and 5609), which may be applied toward the Route II language requirement. Basic linguistic proficiency can be acquired either in Ital 1101-1102-1103 or in the one-quarter accelerated course Ital 3041.

French and Italian courses FrIt 3590, 3604, 3608, and 5587 have no prerequisites and may be applied toward the Route II language requirement.

Study Abroad—The department strongly encourages students to improve their language skills and cultural understanding by incorporating one or more overseas study experiences into their major or minor. The University offers a number of relevant programs in Europe and francophone Africa, including five sponsored directly by this department: 1) the University of Minnesota one-or two-quarter intensive French language program in Montpellier, France; 2) the University of Minnesota academic year in Montpellier program; 3) CIEE's semester or year program of French studies in Brittany; 4) CIEE's year-long critical studies program in Paris; and 5) a year-long multidisciplinary program at Italy's University of Bologna. For further information on options and procedures, see Foreign Study.

B.A. Major Sequence—French

Required Preparatory Courses—1101-1102-1103; 1104-1105-1106; 3015

Major Requirements—3016, 3017 or 3020, 3101, 3103 or course selected from 3209 to 3289

Two courses selected from: 3511, 3512, 3513, 3550

Four upper division courses chosen from any 4-credit 3xxx- or 5xxx-level course except 3020.

5105 or 5505

Courses 3590, 3599, 3601, 3602, 3603, 3607, 3650, and 5607 may not be applied toward the French major.

D grades in major courses will be accepted if offset by an equivalent number of A or B grades in major courses.

For requirements for a teacher's license, see the *College of Education Bulletin*.

Minor Sequence—French

Minor Requirements—Minimum of six courses:

1. Fren 3016, 3017
2. Two courses from 3511, 3512, 3513
3. 3101, 3103

B.A. Major Sequence—Italian

Required Preparatory Courses—1101-1102-1103; 1104-1105-1106; 3015

Major Requirements—3016, 3201, 3501, 3502

Eight literature courses chosen from 3104-5583

Courses 3555, 3590, 5601, 5602, 5603, and 5609 may not be applied toward the Italian major.

Minor Sequence—Italian

Minor Requirements—Minimum of six courses:

1. 3016
2. 3501, 3502
3. Two courses chosen from Ital 3104 through 5383

The minor program must be approved by the director of undergraduate studies.

B.A. Major Sequence—French and Italian

Required Preparatory Courses—Ital 1101-1102-1103; 1104-1105-1106; 3015. Fren 1101-1102-1103; 1104-1105-1106; 3015

Major Requirements—Fren 3101, 3103; Ital 3201; three 3xxx French literature courses; four Italian literature courses; FrIt 3590 or 5505 and either FrIt 3604 or 3608

French (Fren)

1101-1102-1103f, w.s. BEGINNING FRENCH. (5 cr per qtr; prereq 1101 within last 3 qtrs for 1102, 1102 or 2 yrs high school French for 1103)

Basic listening, speaking, reading, and writing skills. Emphasis on communicative competence. Some cultural readings.

1104f, w.s. INTERMEDIATE FRENCH. (5 cr; prereq 1103 or 3 yrs high school French)

Literary and cultural readings. Grammar review and development of writing skills.

1105f, w.s. INTERMEDIATE FRENCH. (5 cr; prereq 1104)

Cultural and literary readings, progressively less structured discussion leading to free expression of ideas through speaking and writing.

1106f, w.s. INTERMEDIATE FRENCH. (5 cr; prereq 1105)

Continued development of all four language skills. Provides an integrated presentation of contemporary French culture to increase student awareness and understanding of cultural differences.

3014. FRENCH PHONETICS. (4 cr; prereq 1106)
Wieland

Theoretical description and practical application of French phonetics, including corrective work.

3015. FRENCH COMPOSITION AND CONVERSATION. (4 cr; prereq 1106)

Emphasis on writing, development of communication skills. Based on a consolidation of grammar.

3016. ADVANCED FRENCH COMPOSITION AND CONVERSATION. (4 cr; prereq 3015 or #)

Builds on 3015, with emphasis on aspects of expression and writing. Readings and discussions with attention to different cultural contexts.

3017. STYLISTICS THROUGH TRANSLATION. (4 cr; prereq 3016 or superior achievement in 3015 or #)

Organized around various perspectives: the arts, economics, ecology, politics, sociology.

3020. FRENCH COMMUNICATION. (3 cr per qtr [9 cr max]; prereq 3015)

Intended to increase active command of the language. Recommended for students planning to use the language in a French milieu. Topics change each quarter.

3101. INTRODUCTION TO FRENCH LITERARY TEXTS: POETRY. (4 cr; prereq 3015 or equiv)

Approaches to literary analysis and techniques examined through critical reading. Aims beyond, but focuses on, poetry.

3103. FRENCH LITERARY TEXTS: NOVEL. (4 cr; prereq 3101 or above)

Approaches to literary analysis and techniques examined through critical reading.

Major Requirements and Course Descriptions

3219. TOPICS IN 16TH-CENTURY FRENCH LITERATURE. (4 cr; prereq 3101, 3103)

Selected texts. Taught in French.

3239. TOPICS IN 17TH-CENTURY FRENCH LITERATURE. (4 cr; prereq 3101, 3103)

Selected texts. Taught in French.

3259. TOPICS IN 18TH-CENTURY FRENCH LITERATURE. (4 cr; prereq 3101, 3103)

Selected texts. Taught in French.

3269. TOPICS IN 19TH-CENTURY FRENCH LITERATURE. (4 cr; prereq 3101, 3103)

Selected texts. Taught in French.

3290. TOPICS IN 20TH-CENTURY FRENCH LITERATURE. (4 cr; prereq 3101, 3103)

Selected texts. Taught in French.

3299. THEMES IN FRENCH LITERATURE. (4 cr; prereq 3101, 3103)

Literature in relation to other cultural activities, e.g., the arts, philosophy, politics.

3511, 3512, 3513. FRENCH CIVILIZATION AND CULTURE. (4 cr per qtr; prereq 3015)

French culture; contrasts between French and North American cultures. *3511*: Middle Ages to the Renaissance. *3512*: 17th and 18th centuries. *3513*: 19th and 20th centuries since the 1789 Revolution.

3550. TOPICS IN FRENCH CIVILIZATION. (4 cr; prereq 3015)

Various aspects of French culture and civilization from the Middle Ages to the present. Taught in French.

3601, 3602. FRENCH LITERATURE IN ENGLISH TRANSLATION. (4 cr per qtr; knowledge of French helpful but not necessary)

3601: Representative works from Middle Ages through the 18th century; movements, genres, themes. *3602*: Representative works from 19th and 20th centuries; movements, genres, themes.

3603. 20TH-CENTURY FRENCH THEATRE IN TRANSLATION. (4 cr; knowledge of French helpful but not necessary)

Plays of major 20th-century French dramatists: Apollinaire, Artaud, Cocteau, Giraudoux, Anouilh, Sartre, Camus, Beckett, Genet, Ionesco, others.

3701. THE DEVELOPMENT OF THE FRENCH LANGUAGE. (4 cr; prereq 3015 or #)

Origins and development of the French language. Selected texts. Present stage and development.

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq Δ)

Guided individual reading or study.

3980. DIRECTED INSTRUCTION. (1-5 cr per qtr; prereq 3015, #, Δ)

5017. COMPOSITION ET STYLISTIQUE. (4 cr; prereq 3017 or #)

Translation, imitation, and composition of fiction and nonfiction, prose and poetry, using English and French texts.

5105. TOPICS IN CRITICISM. (4 cr; prereq 3202 or above) Staff

Introduction to current issues in critical theory for undergraduate majors in French literature.

5207. OLD FRENCH. (4 cr; prereq 3209 or above) Akehurst

Preparation for reading medieval French texts in the original.

5269. FRENCH ROMANTICISM. (4 cr; prereq 3209 or above) Sivert

Reading of principal theoretical and literary works.

5281. EARLY 20TH-CENTURY POETRY. (4 cr; prereq 3209 or above) Preckshot

Poetry as it emerged out of the experiments undertaken at the end of the 19th century that led to a revolution in poetic form and theory; readings from Apollinaire, Jacob, P ret, Breton, Eluard, Aragon.

5289. TOPICS IN AFRICAN LITERATURE. (4 cr; prereq 3209 or above) Preckshot

African values and views of reality compared with "European" values and views of reality compared with "European" values and views, through the analysis of literary creations. Comparison with other arts.

5331. FRENCH POETRY FROM D'AUBIGN  TO LA FONTAINE. (4 cr; prereq 3209 or above) Conley

Movement from baroque to classicism, studied in the great verse works of the 17th century.

5355. NOVEL OF THE 18TH CENTURY. (4 cr; prereq 3209 or above) Waldauer

Emphasis on novels of Marivaux, Diderot, and Laclos.

5368. SHORT STORIES OF THE 19TH CENTURY. (4 cr; prereq 3209 or above) Sivert

From Charles Nodier to Villiers de l'Isle-Adam. (See 5467 for Flaubert.)

5380. THE FRENCH NOVEL IN THE 20TH CENTURY. (4 cr per qtr; prereq 3209 or above) Brewer, Paganini

Includes prose texts. Novel, essay, short story, philosophical r cit, autobiography.

5382. VAL RY AND THE HERITAGE OF SYMBOLISM. (4 cr; prereq 3209 or above) Preckshot

The poetry of Val ry; sources of his concept of poetry.

5385. ART AND LITERATURE. (4 cr; prereq 3209 or above)

Relationship among literary texts aesthetics, semiologies, and the plastic arts.

5415. RABELAIS. (4 cr; prereq 3209 or above) Conley

Gargantua and Pantagruel in original text.

5418. MONTAIGNE. (4 cr; prereq 3209 or above)
Conley
The *Essais* studied in terms of mimesis and ideology.

5434. BAROQUE TRAGEDY: CORNEILLE. (4 cr; prereq 3209 or above)

5457. ROUSSEAU. (4 cr; prereq 3209 or above)
Waldauer

5459. DIDEROT. (4 cr; prereq 3209 or above)
Waldauer

5461. BAUDELAIRE. (4 cr; prereq 3209 or above)
Robinson

5467. FLAUBERT. (4 cr; prereq 3209 or above) Paganini, Sivert

5471. MALLARMÉ. (4 cr; prereq 3209 or above)
Robinson

5475. ZOLA AND THE NATURALISTIC NOVEL.
(4 cr; prereq 3209 or above) Sivert

5489. SARTRE. (4 cr; prereq 3209 or above)
Creative works and critical essays.

5505. TOPICS IN FRENCH CIVILIZATION. (4 cr; prereq 3201 or above, knowledge of French)
Problems of theory and method in study of French civilization. Institutions (e.g., state, media, monarchy, university), concepts defining cultural period (e.g., baroque, postmodern), moments of significant crisis (e.g., 1789, 1859, 1940, and 1968).

5599. PROFICIENCY TEACHING OF FRENCH.
(6 cr [not for CLA degree credit]; prereq teaching certification in French or #) Barnes, Wieland
Intensive work with implications of ACTFL Proficiency Guidelines for the Classroom Teacher, combined with intensive proficiency-oriented language instruction in French.

5701, 5702. STRUCTURE OF MODERN FRENCH: PHONOLOGY, MORPHOLOGY, SYNTAX. (4 cr per qtr; prereq 3014 or 3016 for 5701, 3016 for 5702 or #)
Barnes

5701: Phonology and morphology. Linguistic study of sound systems and word form of contemporary French.
5702: Linguistic study of grammar of contemporary French.

5710. TOPICS IN FRENCH SOCIOLINGUISTICS.
(4 cr; prereq 3016) Wieland
Explores French sociolinguistics, including socioculturally appropriate uses of the language and regional and contextual language variation.

5800. CIEE CONTEMPORARY FILM PROGRAMS IN PARIS. (1-45 cr [undergrad], 1-15 [grad]; prereq 1105 or #)

Semester or year of study in film criticism or history with French faculty. Structural analysis, modern institutions and media, study/criticism of European and American film. Remedial courses in French available. Advanced students may also take courses at Paris universities.

5900. TOPICS IN FRENCH LITERATURE. (3-5 cr per qtr [15 cr max]; prereq 3209 or above)

5910. TOPICS IN FRENCH LITERATURE. (3-5 cr per qtr [15 cr max])

5999. FOREIGN LANGUAGE TEACHING: THEORY AND PRACTICE. (4 cr; prereq grad or #)
Barnes
Theoretical and practical aspects of French language learning and teaching.

Italian (Ital)

1101-1102-1103. BEGINNING ITALIAN. (5 cr per qtr)

Speaking, reading, and cultural studies based on audio-lingual approach. Emphasis on communicative competence. Some cultural readings.

1104. INTERMEDIATE ITALIAN. (5 cr; prereq 1103 or equiv)
Consolidation of basic structures and development of oral fluency through readings and discussions.

1105. INTERMEDIATE ITALIAN. (5 cr; prereq 1104)
Literary and cultural readings, leading to introductory knowledge of Italian literature and civilization.

1106. INTERMEDIATE ITALIAN. (5 cr; prereq 1105)
Further development of reading, writing, listening, and speaking skills through the study of contemporary Italian culture.

3015. INTERMEDIATE ITALIAN COMPOSITION AND CONVERSATION. (4 cr; prereq 1105 or 1104 with grade of A and recommendation of instructor)
Conversation and composition practice to achieve command of Italian in speaking and writing. Conversation based on readings and discussions.

3016. ADVANCED ITALIAN COMPOSITION AND CONVERSATION. (4 cr; prereq 3015 or #)
Techniques of expression and writing. Reading and discussion with attention to cultural texts.

3041. INTENSIVE ITALIAN FOR ROMANCE LANGUAGE MAJORS AND MINORS. (4 cr; prereq 2 yrs Romance language study or #)
Material of first-year Italian covered through comparative study of French, Spanish, and Italian grammar; oral and reading practice. Completion of course with A or B satisfies Graduate School language requirement.

Major Requirements and Course Descriptions

3201. ITALIAN LITERARY TRADITION. (4 cr; prereq 3015 or #)

Tradition and innovation in Italian literature; specific masterpieces. Taught in Italian.

3209. MEDIEVAL ITALIAN LITERATURE. (4 cr; prereq 3015)

Selected texts. Taught in Italian.

3219. RENAISSANCE AND POST-RENAISSANCE ITALIAN LITERATURE. (4 cr; prereq 3015)

Selected texts. Taught in Italian.

3289. MODERN ITALIAN LITERATURE. (4 cr; prereq 3015)

Selected texts. Taught in Italian.

3303. ITALIAN DRAMA. (4 cr; prereq 3015)

Selected texts; development of notions of convention and genre. Taught in Italian.

3305. ITALIAN NOVEL. (4 cr; prereq 3015)

Selected texts; study of genres. Taught in Italian.

3501. ITALIAN CIVILIZATION AND CULTURE. (4 cr; prereq 1105)

Aspects of Italian culture from the Middle Ages to the Renaissance. Taught in Italian.

3502. ITALIAN CIVILIZATION AND CULTURE. (4 cr; prereq 1105)

Aspects of Italian culture from the Baroque period to the Enlightenment. Taught in Italian.

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq #, Δ)

Guided individual reading or study.

5321. CHIVALRIC POETRY: BOIARDO, ARIOSTO, TASSO. (4 cr; prereq 3015) Martinez

5328. RENAISSANCE PROSE WRITERS: MACHIAVELLI, CASTIGLIONE. (4 cr; prereq 3015) Martinez

5385. 20TH-CENTURY NARRATIVE. (4 cr; prereq 3015) Schneider

Evolution and analysis of the modern novel and novella. Authors studied include Calvino, Svevo, Vittorini, others. Taught in Italian.

5401-5402. DANTE. (4 cr per qtr; prereq 3015) Martinez, staff

The *Divina Commedia*; Dante's minor works.

5411. PETRARCH. (4 cr; prereq 3015) Martinez
Readings in English (for nonmajors) and Italian (for majors). Taught in English.

5609. DANTE (IN ENGLISH). (4 cr; prereq #) Martinez

French and Italian (FrIt)

3604. CINEMAS OF THE REAL. (4 cr; knowledge of French and Italian helpful but not necessary) Conley
Film work of major vanguards: surrealism; Vigo, Renoir, Wells, Visconti, Rossellini, DeSica. Course varies in structure.

3608. NEW WAVE CINEMAS. (4 cr; knowledge of French and Italian helpful but not necessary) Conley
Film work of directors recasting classical traditions of Europe and America. Filmic theories of the Western, B-genre; political cinema: Godard, Resnais, Rivette, Pasolini, Antonioni, Bertolucci. Course varies in structure.

5505. SENIOR SEMINAR: THEORIES OF CULTURE. (4 cr)

Comprehensive seminar on contemporary continental theories of language, writing, and culture. Analysis of the structuralist linguistics of Ferdinand de Saussure. How structuralism has influenced recent conception of language, ideology, and culture as symbolic systems.

Genetics and Cell Biology (GCB)

College of Biological Sciences

Staff—Head, Ross G. Johnson, 248a Biological Sciences Center; *Director of Undergraduate Studies,* Norman S. Kerr

Professors: Cunningham, Enfield, Fan, Hackett, R. Herman, W. Herman, Hooper, Johnson, Kerr, King, Magee, McKinnell, Rodell, Rosenberg, Simmons, Sinha, Snustad, Woodward

Associate Professors: Blumenfeld, Brooker, Goldstein, Iwanij, Lefebvre, Silflow

Assistant Professors: Hays, Shaw

Genetics is the study of inheritance, including molecular mechanisms of gene organization and expression, human genetics, and the behavior of genes in populations of organisms. Study in cell and developmental biology seeks to answer basic questions regarding organization, composition, function, and assembly of cells and cellular components, and their regulation during the processes of cellular growth and differentiation.

The Department of Genetics and Cell Biology offers a B.S. degree through the College of Biological Sciences. The courses listed here may be taken by CLA students and frequently are taken by students who

are seeking a B.A. degree in biology through the College of Liberal Arts.

General Education—Courses especially appropriate for nonmajors include Biol 1101, 1301, 3051; GCB 3002, 3008, 3022

3002. HUMAN GENETICS, SOCIAL AFFAIRS.

(3 cr [4 cr with term paper], §3022, §Biol 1101, §Biol 5003; for students in programs not directly related to biological sciences)

Heredity and basic genetic mechanisms in humans. Relationship between human genetics and disease, family planning, gender, behavior, and race. Ethical/societal issues concerning human genetics and modern genetic technologies.

3008. THE BIOLOGY OF CANCER. (3 cr; prereq Biol 1009)

Biological aspects of etiology, phylogeny, and cellular processes involved in neoplasia. Growth and differentiation of normal and cancer cells. History of cancer research.

3022. GENETICS. (4 cr, §Biol 5003; not intended for biology majors; prereq Biol 1009)

Mechanisms of heredity, their implications for biological populations, and applications to practical problems.

3960. RESEARCH TOPICS. (1 cr; prereq 15 cr in biology; S-N only)

Description of ongoing research in the laboratories of department faculty. Introduces sophomores and juniors who are potential majors to department faculty, the diversity of research activities, and opportunities for undergraduate research in genetics and cell biology.

5015. HISTOLOGY: CELL AND TISSUE ORGANIZATION. (5 cr; prereq Biol 5004 or #)

Structure and function of vertebrate tissues and organs. Lectures combine electron microscopy, light microscopy, physiology, and cell biology of higher animals. Laboratory concentrates on light microscopy of mammalian tissues.

5022. GENETICS. (3 cr, §3022, §Biol 5003; not open to grad students in genetics)

Mechanisms of heredity, their implications for biological populations, and applications to practical problems.

5024. THE GENETICS OF DEVELOPMENT. (4 cr; prereq Biol 5003 or #)

Introduction to current concepts and experimental approaches concerning the genetic basis of morphogenesis and metazoan development. Concentrates on organisms amenable to genetic analysis, including certain prokaryotes and single-celled eucaryotes, a nematode, and *Drosophila*.

5030. LABORATORY: GENETICS. (2 cr; prereq 3022 or 5022 or Biol 5003)

Investigative approaches to analysis of genetic problems. Focus on a given organism or related group of organisms may vary quarterly.

5033. POPULATION AND QUANTITATIVE

GENETICS. (4 cr; prereq 3022 or Biol 5003, course in biometry or statistics or #)

Introduction to genetic basis of microevolutionary change. Allelic frequency dynamics, with particular emphasis on natural selection and adaptive topography. Molecular evolution, additive genetic variance, consequences of artificial selection, and current topics.

5034. INTERMEDIATE MOLECULAR GENETICS. (4 cr; prereq Biol 5003, Biol 5004)

Molecular genetics of prokaryotes and eucaryotes, concentrating on the characterization and regulation of expression of genes; techniques used to study gene expression. For advanced bioscience undergraduates and graduate students not in CBS programs.

5035. INTERMEDIATE CELL BIOLOGY. (4 cr; prereq Biol 5004 or #)

Introduction to current literature in cell biology. Selected scientific papers will illustrate new concepts and new experimental approaches to basic questions of cell organization and function. Topics vary but include membranes, secretions, endocytosis, the cytoskeleton, and the nucleus.

5042. QUANTITATIVE GENETICS. (4 cr; prereq 5033; Stat 5301 recommended; S-N only)

Selection with reference to population changes in gene frequencies and means of quantitative characters. Information required for predicting effects of selection and related research. Emphasis on logical analysis.

5061. DEVELOPMENTAL BIOLOGY. (4 cr, §5011; prereq Biol 3011 or 3111, Biol 5004)

Animal embryology; morphogenesis and cellular differentiation, with an emphasis on vertebrates and on pattern formation. The control mechanisms of development.

5073. ADVANCED HUMAN GENETICS. (4 cr; prereq 5034 or #)

Application of molecular, biochemical, chromosomal, and population genetics to human variation and disease. Abnormal chromosome number and structure; abnormal enzyme, structural pattern, receptor, and transport; analysis of inheritance patterns; behavioral genetics; genetic basis of common disease.

5114. GENERAL PHYSIOLOGY. (3 cr; prereq Biol 3011, 5001, Phys 1109 or 1295)

Quantitative approach to the study of cell function, with emphasis on application of physical and chemical principles. Transport, electrical activity of cell membranes, cell contractility.

5134. ENDOCRINOLOGY. (4 cr; prereq Biol 3011, 5001 or #)

Survey of structure and function of invertebrate and vertebrate endocrine systems.

Major Requirements and Course Descriptions

5605. CELL BIOLOGY LABORATORY. (2 cr; prereq Biol 5004 or ¶Biol 5004 or #)
Experimental approaches to cell structure, function, and replication, including microscopy, autoradiography, cell fractionation, and molecular and chemical analyses.

5970. DIRECTED STUDIES. (Cr ar; prereq #, Δ)
Individual study on selected topics or problems, with emphasis on selected readings and use of scientific literature.

5990. DIRECTED RESEARCH. (Cr ar; prereq #, Δ)
Individual projects on selected topics and problems.

Geography (Geog)

Staff—Chair, Eric S. Sheppard, 414 Social Sciences Building; *Director of Undergraduate Studies,* Robert B. McMaster, 573 Social Sciences Building

Professor Emeritus: Mather

Regents' Professor Emeritus: Borchert

Professors: J. Adams, Barrett, Brown, Gersmehl, Hart, Hsu, Lukermann, Porter, Rice, Schwartzberg, Scott, Sheppard, Skaggs

Associate Professors: Leitner, Martin, McMaster, Miller, Squires, Weil

Assistant Professors: Klink, Samatar

Geography describes and explains the past, present, and future locations and spatial patterns of humans and their settlements, cultural and economic traits, and natural resources. The language of maps is a distinctive language of geography and an ability to use and interpret maps is fundamental to the study and practice of geography. Geography offers students an integrative perspective on the relations among social, political, economic, and physical phenomena in space.

General Education—Geography is essential to any liberal or general education program. Beginning courses in geography introduce students to the content and methods of the social sciences (human geography) and the natural sciences (physical geography) and to the art and science of symbolic communication (language of maps). Regional courses examine different parts of the earth, enhancing one's knowledge of the world

(world studies) and its diversity (cultural pluralism). Topical courses examine in detail specific human and physical phenomena from the geographical viewpoint. For students wishing to go beyond the general education opportunities, the department offers B.A. and B.S. degrees, a minor, honors, and independent study.

Study Abroad—Study outside of the United States is a useful and important adjunct to any degree program in geography. Appropriately selected courses will satisfy the major requirements including the field study requirement. See also Foreign Study.

B.A. Major Sequence

Required Preparatory Courses—Two courses selected from 1301, 1401, 1501, 3001

Major Requirements—Minimum of 36 credits with a grade of C or better in courses above 3001 selected from the following groups, with at least one course coming from each group:

1. Regional studies (5xxx level)
2. Topical studies
3. History and philosophy of geography
4. Geographical techniques (includes Forestry 5262)

Field courses: 3940 or 3950 or 3970 or 5701 or through X Registration in any geography course

Senior project: 2 cr written report as part of X Registration in conjunction with any 3xxx or 5xxx geography course, or 3970 or 3990. It must be supervised by a geography department faculty member and submitted at least one quarter before graduation.

One upper-level writing course in English.

All prospective majors must take two required introductory courses before filing their programs; a minimum of 24 geography credits must be taken in this department after declaring the major.

All majors must file a program plan made in consultation with a faculty adviser, within one quarter of declaring the major.

B.S. Major Sequence

All majors must file a program, constructed in consultation with a faculty adviser, within one quarter of declaring the major.

Major Requirements—Minimum of 56 credits with a grade of C or better in courses above 3001 to include:

A minimum of 36 credits in geography specified individually and including:

a minimum of two courses in geographic techniques (includes Forestry 5262)

a minimum of one course in history and philosophy of geography

a minimum of one course in regional geography, exclusive of courses on North America and Europe

a minimum of one geography course that satisfies the CLA cultural pluralism requirement

a field experience course through 3940, 5701, or X Registration in conjunction with any 3xxx- or 5xxx level geography course

a minimum of 2 credits for senior project through 3970, 3985, 3990, or X Registration in a 3xxx or 5xxx geography course

A minimum of 12 credits in supporting fields specified individually

The senior project must be supervised by a geography department faculty member and submitted at least one quarter before graduation.

One upper-level writing course in Composition

Math 1251-1252-1261 or Math 1611-1621 or CSci 3105-3106 or CSci 5101-5102 or Stats through 3012

Demonstrate proficiency that is usually attained after 6 quarters of college study in a language specified on the major requirement form.

Minor Sequence—Minimum of 20 cr, including at least 15 cr at the 3xxx level or above and 7 cr at the 5xxx level, and one course from three of the following groups: regional studies (at the 5xxx level), topical studies, geographical techniques, history and philosophy

Introductory

1301. HUMAN GEOGRAPHY. (5 cr, §1302) Hart, Miller, Schwartzberg, Scott, Weil
Geography of population and principal ways of life; capacity of earth for future population.

1401. INTRODUCTION TO PHYSICAL GEOGRAPHY. (5 cr, §NSci 1501) Barrett, Brown, Gersmehl, Skaggs, Squires
Distribution patterns of climate, relief, vegetation, and soils; regional differences in problems of physical development.

1425. INTRODUCTION TO METEOROLOGY. (4 cr, §Soil 1262) Baker, Klink, Skaggs
The atmosphere and its behavior. Atmospheric composition, structure, stability, and motion; precipitation processes, air masses, fronts, cyclones, and anticyclones; general weather patterns; meteorological instruments and observation; plotting and analysis of maps; forecasting.

1501. THE LANGUAGE OF MAPS. (5 cr) Gersmehl, Hsu, Porter
Maps of many kinds; symbolic vocabulary of spatial communication; analysis of location, distance, direction, shape, area, gradient, trend, and association of features; spatial patterns, inferred causes, and exceptions; perception, meaning, and distortion.

1973. GEOGRAPHY OF THE TWIN CITIES. (4 cr, §3973) J Adams, Borchert
Social and physical characteristics of the Twin Cities. Their place in the urban network of the United States.

3001. INTRODUCTION TO GEOGRAPHIC INQUIRY. (4 cr) Lukermann, Porter, Sheppard
Fundamental geographical concepts (distance, direction, location, hierarchy, scale, circulation, and connection). Physical and human geography treated within the framework of actual and hypothetical worlds.

Regional Studies

3101. GEOGRAPHY OF UNITED STATES AND CANADA. (4 cr) Gersmehl, Hart
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.

3111. MINNESOTA. (4 cr) Borchert
Physical resources, population, and commercial production.

3121. LATIN AMERICA. (4 cr) Barrett, Weil
Physical and human geography of Latin America.

3131. MIDDLE AMERICA. (4 cr) Barrett
Physical and human geography of Mexico, Central America, and the Antilles. Internal and external areal relationships.

Major Requirements and Course Descriptions

3141. AFRICA. (4 cr) Porter, Samatar, Scott
Regional differentiation of human groups and environments; culture contact and problems of underdeveloped countries south of the Sahara.

3161. EUROPE. (4 cr) Leitner, Rice
Roots and distinctiveness of the European culture realm; the diversity of ethnic groups, languages, religions, and the physical environment; the political landscape; the changing nature of urban and rural Europe on both sides of the Iron Curtain; regional differences in levels of economic development and well being; European integration.

3162. THE CHANGING MAP OF EUROPE. (1 cr; prereq German 1105 or #; course can only be taken in conjunction with Geog 3161) Leitner
Offered as German language section to Geog 3161—The Geography of Europe. Examines texts in German pertaining to recent events in Europe, concentrating on their geographic implications.

3211. EAST ASIA. (4 cr, §5211) Hsu
Physical and human geography of China, Korea, and Japan; population pressure, economic development, and international relations.

3212. SOUTH ASIA. (4 cr, §5212) Schwartzberg
Physical and human geography of India, Pakistan, Bangladesh, Sri Lanka, Afghanistan, and Nepal; geographic aspects of social structure, population growth, economic development, and international relations.

3213. SOUTHEAST ASIA. (4 cr) Schwartzberg
Physical and human geography of Burma, Thailand, Indochina, Malaysia, Indonesia, and the Philippines; geographic aspects of social structure, population growth, economic development, and international relations.

3215. CHINA. (4 cr, §5215) Hsu
Socioeconomic geography of China. Environment as resource, population dynamics, economic development, and social change. Geographic organization of human activities, regional contracts, foreign trade, and international relations.

3221f. AUSTRALIA-NEW ZEALAND-OCEANIA. (4 cr) Barrett
Physical and human geography of Australia, New Zealand, Polynesia, and Melanesia; modification of aboriginal use after European contact, current land use trends in non-European societies, and use and modification of environment by Europeans.

5101. HISTORICAL GEOGRAPHY OF NORTH AMERICA. (4 cr) Lukermann
Sequential analysis of settlement and economy in changing environment and resource pattern of North America in the period of frontier interaction, 1500-1900.

5102. HISTORICAL GEOGRAPHY OF NORTH AMERICA. (4 cr) Lukermann
Sequential analysis of settlement and economy in changing environment and resource patterns of North America in the period of sectional industrialization, rural to urban change, and national metropolitan dominance.

5111. SELECTED REGIONS OF THE EASTERN UNITED STATES. (4 cr) Hart
Intensive analysis of regions east of the Great Plains. The regions selected vary yearly.

5131. COLONIAL MEXICO AND THE CARIBBEAN. (4 cr) Barrett
Exploration, discovery, settlement, livelihood, and circulation to about 1800.

5132. SOUTH AMERICA. (4 cr) Weil
Physical resources, population, agriculture, manufacturing, and transportation in countries of South America.

5143. GEOGRAPHY OF WEST AFRICA. (4 cr) Scott
West Africa from Senegal to Cameroon: social geography of resource use, population, settlement, economic development, and international relations.

5145. DEVELOPMENT IN AFRICA. (4 cr, §Afro 5145, §IntR 5145) Samatar, Scott
Examination of economic, political, and social development in Africa from independence to the present, with emphasis on reordering colonial landscapes, bases for North-South relations, big power interventions, and participation in the world economy.

5172. EASTERN EUROPE: GEOGRAPHY AND SOCIETY. (4 cr, §3172) R Adams, Leitner, Rice, Sheppard
For description, see 3172.

5173. NORDEN. (4 cr) Rice
Physical and human geography of Sweden, Finland, Denmark, Norway, and Iceland, with emphasis on population change and settlement patterns.

5178. SCANDINAVIA IN THE MIDDLE AGES. (4 cr, §Hist 5118) Rice
Team-taught, interdisciplinary examination of the economic, political, and social history of Scandinavia from the late Viking period until about 1500. Agrarian and urban societies; peasant and elite perspectives; growth of economic, political, religious, and social institutions.

5211. EAST ASIA: REGIONAL ANALYSIS. (4 cr, §3211) Hsu
Aspects of East Asian life. The effects, within a traditional context, of population growth and modern technology on the transformation of society and reorganization of space.

5212. SOUTH ASIA. (4 cr, §3212) Schwartzberg
For description, see 3212.

5215. CHINA. (4 cr, §3215) Hsu
For description, see 3215.

Topical Studies

3321. POLITICAL GEOGRAPHY. (4 cr) Schwartzberg
Scope and methods; selected concepts, problems, and areas.

3331. ECONOMIC GEOGRAPHY. (4 cr) Leitner, Scott, Sheppard
World patterns of economic activity; levels of development; appraisal of resources, production, circulation, and consumption; principles, models, and planning of economic behavior.

3361. LAND USE AND THE FEDERAL GOVERNMENT. (4 cr) Squires
Statutory and regulatory framework in which individuals choose to use land in the United States; federal role in creating framework.

3362. LAND USE AND STATE GOVERNMENT. (4 cr) Squires
Statutory and regulatory framework in which individuals choose to use land in the United States; state's role in creating framework.

3371. INTRODUCTION TO URBAN GEOGRAPHY. (4 cr) J Adams, Leitner, Miller, Sheppard
Character, distribution, and development of cities in present-day world. Internal and external locational relationships.

3373. THE CHANGING FORM OF THE CITY. (4 cr; prereq 1973 or 3371 or Hist 3901 or Hist 3902 or Urbs 3104 or #) Miller
Urban origins, ancient cultures and cities, the medieval city, the rediscovery of planning, colonial cities, industrialization and urban expansion, speculative cities, utopian cities, planning triumphs and disasters, cities as reflections of society, culture, and the past.

3378. THIRD WORLD UNDERDEVELOPMENT AND MODERNIZATION. (4 cr) Porter, Samatar, Scott, Sheppard, Weil
Processes underlying socioeconomic change in the Third World. Evolving global economy and internal spatial and socioeconomic conditions. Theories of modernization, development, and underdevelopment.

3381. POPULATION GEOGRAPHY. (4 cr) Leitner, Rice, Weil
Characteristics of human populations that relate to the nature of places and regions. Differential growth of populations, with consideration of spatial variations in fertility, mortality, and migration. Regional variations in relationship of population and material welfare.

3421. CLIMATOLOGY. (4 cr; prereq 1401 or 1425 or Soils 1262 or Phys 1071 or #) Klink, Skaggs
World distribution of climatic elements; methods of arranging climatic data; climatic classifications and world distributions of climatic types; general circulation; climatic change and climatic fluctuations.

3431. INTRODUCTION TO PLANT AND ANIMAL GEOGRAPHY. (4 cr; not open to biology majors) Squires
World distribution of plants and animals; biological and ecological background; the geographical picture; the paleoecological record.

3973. GEOGRAPHY OF THE TWIN CITIES. (4 cr, §1973) J Adams, Borchert
For description, see 1973.

5311, 5312. TIME GEOGRAPHY I, II. (4 cr per qtr; prereq #) Miller
5311: Conceptual frameworks for integration of time and space in geographic research; development of time geographic methodology; applications of time geography to social planning; use of time geographic perspective to analyze interrelations among daily activity patterns and social, economic, and institutional structures. *5312:* Analysis of reproduction of social and institutional structures; application of time geographic perspective to research topics.

5361. LAND IN AMERICA. (4 cr; prereq #) Squires
Land ownership in the United States.

5371. NORTH AMERICAN CITIES. (4 cr; prereq 1301 or 1501 or 1973 or 3973 or 3371 or 5001 or #) J Adams
Emergence of towns and cities in North America; urban economy and its locational requirements, past and present; central place theory; comparisons of city systems in capitalist, socialist, and developing areas; land used inside urban areas, structure, and change.

5372. METRO ANALYSIS I: POPULATION AND HOUSING. (4 cr) J Adams
Metro housing stocks, supply of housing services; demand for housing, population and households; housing price structure, changes, intra-urban migration; spatial submarkets and housing in metro areas. Emphasis on linking theory, method, and case studies.

5373. METRO ANALYSIS II: URBAN ECONOMIC GEOGRAPHY. (4 cr) J Adams
Urban economic base analysis, shift-share analysis, and inter-metro competition; input-output analysis with ecological multipliers; central place theory and urban structure, functional regions within the city center; the services economy and metro land development; locational conflict within the city. Emphasis on linking theory, method, and case studies.

Major Requirements and Course Descriptions

5378. CITIES OF THE SOVIET UNION AND EAST EUROPE. (4 cr, §Russ 5378) J Adams

Structure of Soviet and East European urban systems. Land use arrangement in cities. Socialist and Soviet urban planning theory and practice. Migration controls. City government, finance, and services. Urban housing. Land use, environmental conflicts.

5393. THE LOOK OF THE LAND. (4 cr) Hart

Major components of landscapes; interaction between structures created by people and distinctive rural landscapes in North America and northwestern Europe.

5411. MEDICAL GEOGRAPHY. (4 cr) Weil

Concepts and methods in medical geography, including the distribution and diffusion of disease; the impact of environmental, population, and social change on health; the distribution, accessibility, and use of health practitioners and facilities.

5424. APPLIED CLIMATOLOGY. (3 cr, §Soil 5424;

prereq 3421 or Soil 5420 or #) Baker, Klink, Skaggs
Application of climatic principles and data to selected problems in environmental management and agriculture.

5441. QUATERNARY LANDSCAPE EVOLUTION.

(4 cr; prereq 1401 or #) Brown
Examines roles of geomorphic history, climate change, soil development, and vegetation change in evolution of landscape patterns during Quaternary, with emphasis in North America.

5444. GEOGRAPHY OF WATER RESOURCES.

(4 cr; prereq two courses in physical geography or #) Brown
Distributional aspects of the magnitude, quality, and dynamics of water resources. Aesthetic, recreational, and material production uses of water; consequences of human actions in the hydrosphere, especially in fresh water.

5601. INTRODUCTION TO LAND USE PLANNING. (4 cr, §PA 5601) Lukermann

The context of planning within the changing geographic patterns of land use. The nature of land use plans; purpose and process of land use planning.

5605, 5606. GEOGRAPHICAL PERSPECTIVES ON URBAN PLANNING I, II. (4 cr per qtr) Miller

Comparative examination of planning concepts and practices in reshaping the geography of 19th- and 20th-century cities in different national settings (Europe, North America, selected Third World countries). History and ideologies of planning. Planning as a response to societal (economic, political, social) change and problems. Interest groups and power relations in the planning process. Planning the geography of the livable city. 5605: Systematic critical overview of the historical evolutions of planning. 5606: Case studies. Students must complete 5605 and 5606 in order to participate in a summer planning field study course (5701), which will be offered when feasible.

History and Philosophy of Geography

5001. GEOGRAPHICAL ANALYSIS I. (4 cr) Sheppard

Order, science, and geography; measurement, relationship, and classification: location and spatial interaction; spatial diffusion processes; spatial decision making.

5801. DEVELOPMENT OF GEOGRAPHIC

THOUGHT. (4 cr, §3801; prereq three courses in geography, sr) Lukermann
Concepts and methods of geography; differing schools of thought as expressed in contemporary geographic literature.

5808. REGIONAL ANALYSIS OF NORTH AMERICA.

(4 cr; prereq #) Gersmehl
Regions—what they are, where they came from, how we delimit them, how people perceive them, how they interact with other places, and how they change through time. Attendance at selected lectures and slide presentations in 3101 required.

5856. THE MEANINGS OF PLACE. (4 cr, §AmSt

3920, §AmSt 5920, §Arch 5956, #) Martin
Analysis of messages and meanings of our surroundings. Considers Twin Cities central districts, neighborhoods, and selected settings elsewhere. Direct experience.

Geographical Techniques

3511. INTRODUCTION TO CARTOGRAPHY. (5 cr; prereq 5 cr in geography or #) Brown, Hsu, McMaster, Porter

Principles of map design, compilation, specification, and drafting. Map symbols. History of cartography. Projections—analysis of construction, properties, and uses.

3530. CARTOGRAPHY INTERNSHIP. (2-5 cr per

qtr [10 cr max, including combined cr at 3xxx and 5xxx levels]; prereq #) Chu, Hsu, McMaster
Internship with institution, government agency, or private company arranged through and supervised by the department.

3531. QUANTITATIVE METHODS IN GEOGRAPHY.

(4 cr) McMaster, Sheppard, Skaggs
Basic descriptive statistics. Introductory spatial statistics. Graphical methods of analysis. Probability theory. Frequency distributions. Geographical sampling. Hypotheses testing and inferential statistics. Simple linear regression.

5511. CARTOGRAPHIC ANALYSIS. (4 cr; prereq 3511 or a basic course in statistics) Brown, Hsu, McMaster, Porter

Cartographic-quantitative analysis and mapping of geographic data; classification, areal sampling, generalization including the scale problem. Analysis of cartographic communication.

5512. CARTOGRAPHY: TOPICS. (4 cr; prereq 3511, 3531 or #) Brown, Hsu, McMaster, Porter
Selected topics: the system of cartographic communication, map design, map reading, map analysis, history of cartography.

5522. COMPUTER CARTOGRAPHY: PRINCIPLES AND DESIGN CONCEPTS. (4 cr; prereq 3511 or #) Hsu
Elements and principles of cartographic design; applications to different map themes; using the microcomputer with package software to explore message-focused map design.

5530. CARTOGRAPHY INTERNSHIP. (2-5 cr per qtr [10 cr max, including combined cr at 3xxx and 5xxx levels]; prereq #) Chu, Hsu, McMaster
For description, see 3530.

5531. QUANTITATIVE RESEARCH DESIGN. (4 cr; prereq at least one course in basic statistics) Klink, McMaster, Sheppard
Intermediate statistical methods for handling geographical data; multivariate methods, regionalization, spatial autocorrelation, spatial pattern analysis.

5562. INTRODUCTION TO GEOGRAPHIC INFORMATION SYSTEMS. (4 cr; prereq jr or sr geography major or grad or landscape architecture major or #) Brown, McMaster
Basic concepts of geographic information systems structure. Theory and applications for geographic research, location and resource analysis, and regional planning. Location principles, data structure, variable attributes.

Directed and Special Studies

3940. DIRECTED FIELD STUDY. (2-4 cr; prereq #)
Guided individual field study.

3950. UNDERGRADUATE SEMINAR. (4 cr per qtr; prereq 10 cr in geography or #) Staff
Supervised investigation of selected topics.

3970. DIRECTED STUDIES. (1-15 cr per qtr) Staff
Guided individual reading or study.

3985. SENIOR PROJECT SEMINAR. (4 cr; prereq geography major, Comp 3014 or equiv)
Introduction to the selection and design of a senior project.

3990. DIRECTED RESEARCH. (1-15 cr per qtr)
Staff

5701. FIELD RESEARCH. (4 cr; prereq 12 cr in geography, #) Staff
Field investigation in physical, cultural, and economic geography; techniques of analysis and presentation; reconstruction of environments.

5710. FIELD INTERNSHIP. (1-8 per qtr, §IntR 5701; prereq IntR 5930)
Requirements and credits vary with nature of internship. MSID will normally carry 8 credits per quarter for up to two quarters. All internships will be carried out off-campus and require contact with departmental supervisor specifying work to be accomplished and means of reporting achievement.

5900. TOPICS IN GEOGRAPHY. (4 cr per qtr; prereq sr or grad, Δ)
Special topics and regions. Course offered by visiting professors in their research fields.

Geology and Geophysics (Geo)

*Newton Horace Winchell School of Earth Sciences
Institute of Technology*

Staff—Head, Peter Hudleston, 106 Pillsbury Hall; *Director of Undergraduate Studies,* Chris Paola, 30B Pillsbury Hall; *Director of Graduate Studies,* William Seyfried, Jr., 104C Pillsbury Hall

Regents' Professor Emeritus: Wright

Professors Emeriti: Swain, Walton, Zoltai

Professors: Alexander, Banerjee, Grew, Hooke, Hudleston, Karato, Kelts, D. Kohlstedt, S. Kohlstedt, Morey, Murthy, Pfannkuch, Seyfried, Shapiro, Sloan, Stout, Weiblen, Yuen

Associate Professors: Ito, Kleinspehn, Moskowitz, Paola, Teyssier

Assistant Professor: Edwards

Adjunct Faculty—Chandler (Minn. Geological Survey), Engstrom (Limnological Research Center), Goldich (U.S. Geological Survey, Denver, Colorado), Johnson (Honeywell), Southwick (Minn. Geological Survey), Wanamaker (Institute for Rock Magnetism), Watts (Trinity College, Dublin, Ireland)

Geology is concerned with the physical, chemical, and biological processes that continuously restructure and redistribute the material on and within the Earth, and with the historical development of the Earth through these shaping processes.

Careers in geology could involve work on environmental problems, resource exploration, or research in any aspect of the dynamics of the Earth and history.

Major Requirements and Course Descriptions

Students intending to satisfy CLA group B laboratory requirements by taking 1001 also must complete the lab course, 1021.

Major changes in the geology curriculum will be completed by the end of the 1991-92 academic year. To obtain the updated B.A. requirements, visit the Geology Department or the CLA Pre-major Advising Office.

B.A. Major Sequence

Required Preparatory Courses—Chem 1051-1052, Math 1251-1252-1261 (sequences to be started fr yr); Phys 1251-1252-1253-1254; Upper-level writing course, Comp 3015 or 3031 highly recommended (to be taken jr yr or no later than 1st qtr of sr yr)

Major Requirements—Core courses: fr yr, 1111s; soph yr, 3112f, 3401w, 3102s; jr yr, 5651f, 5501w, 5201s, 5111su

Minor Sequence

Required Preparatory Courses—1001 and 1021 or 1111

Minor Requirements—20-25 cr of 3xxx- or 5xxx-level geology courses

The department offers two B.S. degree programs in the Institute of Technology, in geology and in geophysics. You should consult the department director of undergraduate studies about selection of a program and coursework if you are considering a scientific career.

1001f,w,s. THE DYNAMIC EARTH: AN INTRODUCTION TO GEOLOGY. (4 cr; 4 lect hrs) Staff
A nonmathematical introduction to earth: its internal structure; processes that shape its surface; theory of plate tectonics; action of streams, glaciers, waves, wind, and groundwater; limnology; fossil fuels and mineral deposits; environmental geology, planetary geology, and the geology of Minnesota.

1002w,s. HISTORICAL GEOLOGY. (4 cr; 3 lect hrs, one 2-hr lab per wk) Sloan
Evolution of earth from its origin; succession of physical and biological events of past 600 million years.

1005w. GEOLOGIC PERSPECTIVES ON ENERGY. (4 cr; 4 lect hrs per wk) Alexander
Introduction to geologic aspects of energy resources, conventional and nonconventional. History of energy use, distribution and amounts of known and potential reserves, environmental aspects, and implications of U.S. consumption patterns.

1011w. VOLCANOES OF THE EARTH. (4 cr; 4 lect hrs) Stout
Nonmathematical introduction to volcanoes, their origin and distribution on earth and through time; theory of plate tectonics, origin of magmas and the earth's interior; the products of volcanoes, types of eruptions and hazards, and impact on climate, vegetation, and society.

1012f. PLANET EARTH. (4 cr; 3 lect hrs) Staff
Nonmathematical introduction to planet Earth. Emphasizes relationships between earth systems: solid earth, hydrosphere and atmosphere; natural cycles that control the way the planet works; how human interactions perturb natural cycles and their rates.

1019. OUR CHANGING PLANET. (4 cr, §Ast 1019, §EEB 1019)
The interrelationships among Earth's subsystems—solid earth, oceans, atmosphere and biosphere, and solar and galactic super-systems. Interactions of natural cycles, their rates, feedback, and human impacts.

1021f,w,s. INTRODUCTION TO GEOLOGY LAB: GEOLOGY OF MINNESOTA. (1 cr; prereq 1001 or ¶1001 or #; one 2-hr lab) Staff
Ten laboratory exercises based on the geology of Minnesota. Introduction to the bedrock, glacial history, topography, mineral resources, and environmental geology of the state through the use of appropriate minerals, rocks, topographic and geologic maps.

1022s. HISTORICAL GEOLOGY. (4 cr, §1002, §3112; prereq 1001, 1021 or 1111; 3 lect hrs, one 2-hr lab per week) Sloan
Evolution of Earth from its origin to present, changes in continental structure and biology through past 4.6 billion years.

1111s. INTRODUCTORY PHYSICAL GEOLOGY. (5 cr; prereq high school or college chemistry or #; for prospective majors and others desiring more intensive course; 3 lect hrs, 1 rec hr, two 2-hr labs per wk) Staff
For description, see 1001 and 1021.

1601w. OCEANOGRAPHY. (4 cr; 3 lect, 1 lab hrs per wk) Barnwell, Paola, Shapiro
How various processes in the ocean interact; analogies between the oceans and Lake Superior and smaller lakes in Minnesota. Topics include marine biology, waves, tides, chemical oceanography, marine geology, and human interaction with the sea. Lab work includes study of live marine invertebrates and manipulation of oceanographic data.

3102s. PETROLOGY. (5 cr; prereq 3401 or #; open only to geology, geophysics, geo-engineering or mineral engineering majors) Weiblen

The lithologic character and genesis of igneous and metamorphic rocks.

3112f. EARTH HISTORY. (5 cr; prereq 1111 or #; for prospective majors and others desiring more intensive course than 1002; 3 lect hrs, two 2-hr labs per wk) For description, see 1002.

3211s. HONORS EARTH SCIENCE. (4 cr, §1001/1021, 1111; prereq selection for IT honors curriculum or consent of IT honors office; 4 lect hrs, 1 rec hr per wk) Staff

Application of physics and chemistry to the structure and dynamics of the earth.

3401w. INTRODUCTORY MINERALOGY. (5 cr, §5004, §5404; prereq 1001 or 1111 or #, one term college chemistry, Math 1252; 3 lect, 4 lab hrs per wk) Karato

Crystallography, crystal chemistry, and crystal physics. Physical and chemical properties, crystal structures, and chemical equilibria of the major mineral groups. Laboratory includes crystallographic, polarizing microscope, X-ray powder diffraction exercises, hand specimen mineral identification.

3990f,w,s. PROBLEMS IN GEOLOGY AND GEOPHYSICS. (1-6 cr; prereq #, Δ)

Research or problems selected on the basis of individual interests and background.

5004w. MINERALOGY. (4 cr, §3401; prereq one term college chemistry, Math 1252, #; not open to geology, geophysics, and geological, mineral, and metallurgical engineering majors; 3 lect, 4 lab hrs per wk) Karato
For description, see 3401.

5051su. PHYSICAL GEOLOGY FOR TEACHERS. (4 cr, §1001, §1111; prereq 1 qtr college chemistry or physics; only for students with degrees in education) For description, see 1001 and 1021.

5052su. HISTORICAL GEOLOGY FOR TEACHERS. (4 cr, §1002, §3112; prereq 1001 or 1111 or 5051 or #; only for students with degrees in education; offered through Extension) For description, see 1002.

5100. ADVANCED GENERAL GEOLOGY. (1-2 cr per qtr; prereq 1001 or 1111; S-N only) Staff
Seminar course on geology of an area, followed by field trip to the location. Regions studied vary yearly.

5108w. ADVANCED ENVIRONMENTAL GEOLOGY. (4 cr; prereq geology core curriculum 1111 through 5201 for majors or equiv or #) Pfannkuch
Human impact on the geological environment and the effect of geology/geologic processes on human life from the point of view of ecosystems and bio-geochemical cycles. Geologic limits to resources and carrying capacity of the earth. Land use planning, environmental impact assessment, ecogeologic world models. Field project.

5111su. FIELD GEOLOGY. (5-9 cr; prereq 5201, #; restricted to geology, geophysics, and geo-engineering majors) Staff

Geologic mapping on topographic maps and aerial photos; field identification of igneous, sedimentary, and metamorphic rocks; measurement of stratigraphic sections; study of structural and geomorphic features. Major report on fieldwork required.

5151f. INTRODUCTION TO PALEONTOLOGY. (5 cr; prereq 1002 or 1022 or 3112 or #) Sloan
Morphology, classification, and ecology of selected major fossil groups.

5154w. VERTEBRATE PALEONTOLOGY I. (5 cr; prereq 5151 or EEB 5114) Sloan
Morphology, evolution, and stratigraphic distribution of fossil fish, amphibians, reptiles, and birds.

5155s. VERTEBRATE PALEONTOLOGY II. (5 cr; prereq 5154 or EEB 5114) Sloan
Morphology, evolution, and stratigraphic distribution of fossil mammals.

5201s. STRUCTURAL GEOLOGY. (5 cr; prereq 3102, 3401 or #; open only to IT upper division majors in geology, geophysics, geo-engineering, mineral engineering, or CLA jr or sr majors in geology) Teyssier
Primary and secondary structures of rocks; mechanics and modes of deformation; field methods in geology. Field trips.

5202s. TECTONIC STYLES. (3 cr; prereq 5201 or #; 3 lect hrs per wk; offered 1994 and alt yrs) Hudleston
Origin and nature of major types of disturbances affecting continental crust, including analysis of form and development of individual structural components.

5203w. GEOTECTONICS. (3 cr; prereq 5201 or #; offered 1994 and alt yrs) Teyssier
Problems associated with global tectonics; structure and evolution of the earth's crust and lithosphere; study of active compressional, extensional, and wrench tectonic regimes, with numerous examples from various parts of the world; interpretation of older tectonic systems.

5251s. GEOMORPHOLOGY. (4 cr [5 cr with term project]; prereq 1001, Math 1111 or #; 3 lect, 2 lab hrs per wk; lab often used for field trips) Hooke
The origin, development, and continuing evolution of landforms in various environments. Weathering, slope and shore processes, fluvial erosion, and deposition, wind action, tectonics, and impact phenomena.

Major Requirements and Course Descriptions

5252w. REGIONAL GEOMORPHOLOGY. (3 cr; prereq 5201 or #; offered 1994 and alt yrs) Hooke
The geology of a particular region of the country and its geomorphology. One-week field trip to the area late in the quarter.

5255w. GLACIOLOGY. (4 cr [5 cr with term project]; prereq Math 3221 or equiv or #; offered 1993 and alt yrs) Hooke
Theories of glacier flow. Internal structures and heat flow in glaciers and ice sheets. Reading assignments and problems.

5261f. GLACIAL GEOLOGY. (4 cr [5 cr with term paper or map lab]; prereq 1002 or 3112 or #)
Formation and characteristics of modern glaciers; erosional and depositional features of Pleistocene glaciers, history of Quaternary environmental changes in glaciated and nonglaciated areas. Field trips.

5311f. GENERAL GEOCHEMISTRY. (4 cr; prereq 2 qtrs college chemistry or #) Ito, Seyfried
Principles pertaining to the distribution and control (structural, thermodynamic, kinetic) of chemical species in the earth and its hydrosphere.

5313s. AQUEOUS GEOCHEMISTRY. (4 cr; prereq 5311, Chem 5520 or #) Seyfried
General principles of solution chemistry with application to geology, including solution-mineral equilibria, redox processes in natural waters, and geochemistry of hydrothermal fluids.

5321w. NUCLEAR GEOLOGY. (4 cr; prereq 5311 or #) Alexander, Ito
Introduction to theory and uses of radioactive, radiogenic, and stable isotopes in geology. Radioactive dating, geothermometry, and tracer techniques in geologic processes.

5405. OPTICAL MINERALOGY. (2 cr; prereq 3401 or #3401) Staff
Optical properties of minerals; symmetry and crystal optics; identification of minerals using the polarizing microscope.

5452s. IGNEOUS AND METAMORPHIC PETROLOGY. (5 cr; prereq 3102, Chem 5520 or 5521, Math 3211 or #) Stout
Basic thermodynamic tools and chemographic analysis for interpretation of chemical processes in igneous and metamorphic rocks. Laboratory, field trip, problem sets, and term paper.

5501w. GEOPHYSICAL METHODS IN GEOLOGY. (4 cr; prereq 3102, Phys 1254; open only to upper division IT or CLA students or #)
Geophysical properties of the earth and earth materials, internal structure and constitution, geophysical exploration methods and geologic interpretation, radioactivity and thermal structure of the earth, physical basis for plate tectonics.

5505f. SOLID EARTH GEOPHYSICS I. (4 cr; prereq 1111, Phys 1254)
Earthquake seismology; physical structure of the earth's crust and deep interior; gravity field of the earth.

5506w. SOLID EARTH GEOPHYSICS II. (4 cr; prereq 1111, Phys 1254 or #) Banerjee
Gravity and magnetic fields of the earth; paleomagnetism, thermal history of the earth.

5507. SOLID EARTH GEOPHYSICS III. (4 cr; prereq 1111, Phys 1291) D Kohlstedt
Mechanical properties and transport processes in earth materials, with emphasis on their importance to a range of geophysical phenomena.

5508. MINERAL AND ROCK RHEOLOGY. (4 cr; prereq 1111, Phys 1254) Karato
Elastic, anelastic, and viscous deformation of minerals and rocks. Materials science fundamentals and geological/geophysical applications.

5515w. PRINCIPLES OF GEOPHYSICAL EXPLORATION. (4 cr; prereq Phys 1254)
Seismic exploration (reflection and refraction), potential techniques (gravity and magnetics), and electrical techniques of geophysical exploration.

5521s. DATA PROCESSING METHODS IN GEOPHYSICS. (3 cr; prereq 5515, 1 yr calculus)
Digital data processing techniques used in geophysical exploration.

5535f. GEOLOGICAL THERMOMECHANICAL MODELING. (4 cr; prereq Math 3221 or #) Yuen
Concept of heat and mass transfer processes in earth's crust and mantle. Quantitative study of thermomechanical phenomena. Emphasis on both analytical and modern numerical techniques.

5536s. APPLICATIONS OF FLUID MECHANICS TO GEOLOGICAL PROBLEMS. (4 cr; prereq 1 yr calculus, CE 3400 or AEM 3200 or #) Yuen
Scaling of equations for geological approximations, applications to geological situations, rheology.

5541f. GEOMAGNETISM. (3 cr; prereq 1 qtr each geology, physics, math; offered 1990 and alt yrs) Banerjee
Present geomagnetic field, secular variation and westward drift, Dynamo Theory for the origin of the field. Origin of natural remanent magnetization and its stability, paleomagnetic measurement techniques, axial dipole hypothesis and virtual geomagnetic poles, field reversal vs. self-reversal. Polar wandering and continental drift, seafloor spreading, and plate tectonics.

5601f. LIMNOLOGY. (4 cr, §EEB 5601; prereq Chem 1052 or equiv) Shapiro
Events occurring in lakes, reservoirs, and ponds; their origins; their physics, chemistry, and biology. Interrelationships of these parameters; effects of civilization on lakes.

5603w. GEOLOGICAL LIMNOLOGY. (4 cr; prereq 5601 or EEB 5601)

Tectonic and climatic setting of lakes; physical, chemical, and biological processes of sedimentation in lakes.

5611s. GROUNDWATER GEOLOGY. (4 cr; prereq 1001 or 1111, Math 1261, 1 qtr physics and chemistry or #) Pfannkuch

Origin, occurrence, and movement of groundwater viewed in the context of the hydrologic cycle. Characteristics of aquifer systems. Exploratory investigations. Hydrogeologic units and boundaries of regional systems. Analysis of surface water and groundwater interaction, recharge. Quality and chemistry of groundwater supplies.

5613f. TRACERS IN HYDROGEOLOGY. (3 cr; prereq 5611, #; offered 1993 and alt yrs) Alexander, Pfannkuch

Review of the use of tracers in hydrogeology to determine the source, age, and mixing parameters of water in various natural reservoirs.

5615. PETROLEUM RESERVOIR GEOLOGY.

(2 cr; prereq 1001 or #) Ito, Pfannkuch
Subsurface geology and its application to the evaluation of petroleum and natural gas reservoirs.

5621s. LIMNOLOGY LABORATORY. (2 cr, §EEB 5621; prereq 5601 or EEB 5601 or #) Megard
Laboratory to accompany 5601 (EEB 5601). Techniques for obtaining information about conditions in lakes and streams. Procedures for measuring abundance and population dynamics of aquatic organisms, with special emphasis on plankton. Field instruments, sampling devices, chemical analyses, microscopy, and analysis of data. One Saturday field trip.

5651f. SEDIMENTOLOGY. (5 cr; prereq 3102; open only to IT upper division majors in geology, geography, geo-engineering, mining engineering, or CLA jr or sr majors in geology or #) Paola
Interpretation of the origin of sedimentary rocks through application of basic physical and chemical principles; understanding of modern depositional environments; petrochemical microscopy.

5652w. SEDIMENTARY PETROLOGY AND PROCESSES. (5 cr; prereq 3102, 5651 or #; offered 1994 and alt yrs) Kleinspehn, Paola

Analysis of hand-specimen scale and microscopic features of carbonate and clastic sedimentary rock and their associated chemical, biological, and physical processes. Topics include primary structures, petrographic microscopy, diagenesis, and new analytical techniques in sandstone petrology.

5653w. STRATIGRAPHY AND BASIN ANALYSIS. (4 cr [6 cr with lab]; prereq 5651 or #; offered 1993 and alt yrs) Kleinspehn

Modern techniques and principles of stratigraphic analysis of sedimentary basins in various tectonic settings. Topics include seismic stratigraphy, correlation techniques, paleocurrent analysis, and geochronology of sedimentary basins.

5654w. MARINE SEDIMENTARY ENVIRONMENTS. (4 cr; prereq 5651 or #; offered 1994 and alt yrs) Kleinspehn

Principles of facies analysis of modern and ancient marine depositional systems.

5655w. CONTINENTAL SEDIMENTARY ENVIRONMENTS. (4 cr; prereq 5651 or #; offered 1993 and alt yrs) Kleinspehn

Principles of facies analysis of modern and ancient non-marine depositional systems.

5656w. DEPOSITIONAL MECHANICS. (4 cr; prereq 5651 or #; offered 1993 and alt yrs) Paola
Elementary mechanics of sediment transport applied to the quantitative interpretation of sedimentary rocks.

5980. SEMINAR: CURRENT TOPICS IN GEOLOGY AND GEOPHYSICS. (1-6 cr; prereq #) Staff

5990f,w,s. SENIOR THESIS. (2 cr per qtr [6 cr max]; prereq geology or geophysics major with 4th yr standing, #) Staff

A nonstructured research course to enable senior-level majors to engage in independent research with faculty supervision. Problems selected according to individual interests by consultation with faculty committee. Thesis and oral defense.

German

Staff—Chair, Gerhard H. Weiss, 231 Folwell Hall; *Director of Undergraduate Studies*, to be announced; *Director of Language Instruction*, Ray M. Wakefield, 213 Folwell Hall

Professor Emeritus: Hirschbach

Professors: Firchow, Joeres, Liberman, Schulte-Sasse, Taraba, Weiss, Zipes

Associate Professors: Duroche, Fullerton, McCormick, Teraoka (on leave 1992-93), Wakefield

The Department of German offers a major and minor in German and a minor in Dutch. German and Dutch include the study of the spoken language and of the literature, philology, culture, and civilization.

Major Requirements and Course Descriptions

General Education—German literature courses in translation (3604, 3610, 3641), Dutch literature in translation (3610), and topics in Dutch culture (3510) have no prerequisites and offer a sound introduction to major trends and aspects in German or Dutch literature and culture.

Placement—There are two first-year German options: German 1101-1102-1103 is the standard classroom sequence; German 1000-1110 (offered only through Extension) uses an individualized approach for the equivalent of the first three quarters of German. To enroll for second-year courses, CLA students must pass 1103, the 10th credit of 1110, or the entrance proficiency test. Consult the department for further information on placement and testing.

Study Abroad—The department recommends study abroad in a German-speaking country for at least six months in order to acquire cultural familiarity and language fluency. See also Foreign Study.

B. A. Major Sequence—German

Required Preparatory Courses—1106 and the Graduation Proficiency Test

Major Requirements—3104 or 3104H, 3105 or 3105H, 3342 or 3342H; upper-level writing course, Comp 3011 or 3012 or 3013 or 3014; one of the following sequences:

Literature Emphasis—One course from each of the following groups (a course may be applied to only one group):

1. Early German literature through the baroque: 3401, 3411
2. Enlightenment, *Sturm und Drang*, and Classicism: 3301, 3311, 3421, 3422, 3423, 3424
3. 19th-century literature: 3302, 3312, 3431, 3432
4. 20th-century literature: 3043, 3303, 3313, 3441, 3442, 3443, 3604, 5371, 5471, 5472
5. Civilization and culture: 3501, 3502, 3510, 3511, 3512, 3513, 3590, 5331, 5371, 5510

6. Conversation and composition: 3011, 3012, 3013, 3014, 3015, 3016, 3021, 5011, 5016

7. Philology: 3701, 3702, 3703, 3704, 3705

Plus two 3xxx or 5xxx elective German courses

German Studies Emphasis—At least four courses from 3011, 3012, 3013, 3014, 3015, 3016, 3021, 5011, 5016

At least four courses from 3501, 3502, 3510, 3511, 3512, 3513, 3590, 5331, 5510

One 3xxx or 5xxx elective German course

Three courses in art history, economics, geography, history, humanities, international relations, music, political science, or Western European area studies that concentrate on German-speaking or central European areas

Language Emphasis—Four courses from 3011, 3012, 3013, 3014, 3015, 3016, 5011, 5016

Four courses in development of the German language: 3702, 3703, 3704, 3705

A minimum of two of the following courses: 3401, 3411, 3511, 3512, 3513, 5101, 5102

The department recommends the following courses: Ling 3001/5001, Ling 3601/5601.

Courses taught in translation, except 3604 and 5xxx-level film classes, do not count toward the major, nor do courses taken S-N. No more than two courses graded D can count toward the major; these courses must be offset by the same number of A or B grades in the major.

The major program must be approved by the director of undergraduate studies.

For teacher's licensure requirements, see the *College of Education Bulletin*.

Minor Sequence—German

Required Preparatory Courses—1106 and the Graduation Proficiency Test

Minor Requirements—3104, 3105; one course from 3011, 3012, 3013, 3014, 3015,

3016; 12 cr of 3xxx-5xxx elective German courses

All courses must be taken A-F. No more than one course may be in directed or independent study. Courses taught in translation, except 3604 and 5xxx-level film classes, do not count toward the minor.

The minor program must be approved by the director of undergraduate studies.

Minor Sequence—Dutch

Required Preparatory Course—1106

Minor Requirements—3011, 8 cr of 3310, 3510, two additional courses to be chosen with the adviser

German (Ger)

1101-1102-1103. BEGINNING GERMAN. (5 cr per qtr, §1000 for 1101, §1110 for 1102-1103) Emphasis on proficiency according to the national ACTFL system. All four language modalities (listening, reading, speaking, writing); sequential emphasis beginning with the reception modalities, listening and reading, followed by the production modalities, speaking and writing.

1104-1105-1106. INTERMEDIATE GERMAN. (5 cr per qtr; prereq 1103 or satisfactory completion of entrance standard proficiency test at 1103 level) Emphasis on proficiency according to the national ACTFL system. All four language modalities (listening, reading, speaking, writing) at the Intermediate and Advanced levels on ACTFL scale.

3011-3012-3013. CONVERSATION AND COMPOSITION. (4 cr per qtr; prereq 1106, graduation proficiency test) Spoken German; composition; development of vocabulary; grammar review.

3014. CONVERSATION AND COMPOSITION. (4 cr; prereq 3013) Focus on the media. Reading and analysis of German newspapers and journals; exercises using German-language radio and video broadcasts.

3015. CONVERSATION AND COMPOSITION. (4 cr; prereq 3013) Technical, scientific, and scholarly use of German in both written and oral form.

3016. TECHNIQUES OF TRANSLATION. (4 cr; prereq 3013) Translation of various texts into and from German.

3021w. BUSINESS GERMAN. (4 cr; prereq 3013 or equiv)

Oral and written command of the language used by German business and industry. Reading and discussion of German business documents; the basic format of business and other formal letters and preparation of reports.

3040. GERMAN PLAY. (1-3 cr per qtr; prereq 1103 or 1110, #)

Use of standard German through participation in a biennial dramatic production.

3104. READING AND ANALYSIS OF PROSE. (4 cr; prereq 1106 or the graduation proficiency test) Reading fluency; appreciation of literary values through literary interpretation and familiarization with critical terminology.

3104H. HONORS COURSE: READING AND ANALYSIS OF PROSE. (4 cr; prereq 1106, the graduation proficiency test or honors student or #) For description, see 3104.

3105. READING AND ANALYSIS OF DRAMA AND POETRY. (4 cr; prereq 1106 or the graduation proficiency test) For description, see 3104.

3105H. HONORS COURSE: READING AND ANALYSIS OF DRAMA AND POETRY. (4 cr; prereq 1106, the graduation proficiency test or honors student or #) For description, see 3104.

3301. LYRIC POETRY: KLOPSTOCK THROUGH HÖLDERLIN. (4 cr; prereq 3104, 3105)

3302. LYRIC POETRY: NOVALIS THROUGH LIL- IENCRON. (4 cr; prereq 3104, 3105)

3303. LYRIC POETRY: RILKE TO THE PRESENT. (4 cr; prereq 3104, 3105)

3310. STUDIES IN GERMAN AUTHORS. (4 cr per qtr; prereq 3104, 3105) Works of one author (e.g., Kleist, Heine, Büchner, Hoffmannsthal) studied in depth.

3312. GERMAN DRAMA: 19TH CENTURY. (4 cr; prereq 3104, 3105)

3313. GERMAN DRAMA: NATURALISM TO THE PRESENT. (4 cr; prereq 3104, 3105)

3341H. PROSEMINAR IN GERMAN. (4 cr; prereq #; nonhonors students may enroll with #) Significant themes in German literature.

3342. MAJOR PROJECT IN GERMAN. (4 cr; prereq Δ) Students prepare their major project in a seminar setting under supervision of a faculty member.

Major Requirements and Course Descriptions

3342H. MAJOR PROJECT IN GERMAN. (4 cr; prereq Δ)

For description, see 3342.

3401. MEDIEVAL LITERATURE. (4 cr; prereq 3104, 3105)

Political, social, and intellectual spheres of life in medieval Germany; major literary works.

3411. RENAISSANCE AND BAROQUE. (4 cr; prereq 3104, 3105)

Major literary developments; movements that shaped more recent German literature.

3423. CLASSICISM. (4 cr; prereq 3104, 3105)

Weimarer Hochklassik of the late 18th and early 19th centuries. Literary works and aesthetic criticism in historical and cultural context.

3424. FAUST. (4 cr; prereq 3104, 3105)

Goethe's *Faust*, Parts I and II.

3431. ROMANTICISM. (4 cr; prereq 3104, 3105)

German literature of the Romantic Period; its intellectual and historical background.

3441, 3442, 3443. 20TH-CENTURY LITERATURE.

(4 cr per qtr; prereq 3104, 3105)

3441: From 1890 to 1918. **3442:** From 1918 to 1933.

3443: From 1933 to the present.

3460. WOMEN WRITERS IN GERMAN LITERATURE. (4 cr [12 cr max]; prereq 3104, 3105)

Selected German women writers. Approaches may be thematic, generic, or chronological. Readings in feminist theory.

3490. TOPICS IN GERMAN LITERATURE. (4 cr per qtr [12 cr max]; prereq 3104, 3105)

Intensive exploration of topics or issues in German literature not dealt with in period courses.

3501. CONTEMPORARY GERMANY: THE FEDERAL REPUBLIC. (4 cr; prereq 1106 or the graduation proficiency test)

Culture of the Federal Republic of Germany and its evolution since 1949.

3502. CONTEMPORARY GERMANY: THE GERMAN DEMOCRATIC REPUBLIC. (4 cr; prereq 1106 or the graduation proficiency test)

Culture of the former German Democratic Republic and its evolution since 1949.

3510. TOPICS IN GERMAN STUDIES. (4 cr per qtr [8 cr max]; prereq 1106 or the graduation proficiency test)

One topic in depth dealing with the culture or civilization of German-speaking countries.

3511. GERMAN CIVILIZATION AND CULTURE: MIDDLE AGES TO THE RENAISSANCE. (4 cr;

prereq 3104, 3105, one additional 3xxx German course) Movements and personalities in art, music, science, religion, and education. Lectures in German.

3512. GERMAN CIVILIZATION AND CULTURE: REFORMATION TO 1800. (4 cr; prereq 3104, 3105, one additional 3xxx German course)

For description, see 3511.

3513. GERMAN CIVILIZATION AND CULTURE: 1800 TO PRESENT. (4 cr; prereq 3104, 3105, one additional 3xxx German course)

For description, see 3511.

3530. SELECTED WRITINGS IN GERMAN INTELLECTUAL HISTORY. (4 cr; prereq 3104, 3105, one additional 3xxx German course)

Authors and philosophers such as Lessing, Schiller, Kant, Hegel, Marx, Nietzsche, and Freud.

3590. DIRECTED STUDIES IN GERMAN-SPEAKING COUNTRIES. (5 cr per qtr; prereq 3501, #)

Preparation for research abroad during quarter before departure; research completed while abroad. Written reports and oral examinations upon return.

3604. LITERATURE, HISTORY, AND THE GERMAN FILM. (4 cr; requires no knowledge of German; may be taken for cr toward major or minor by doing a portion of the reading in German)

Modern German culture seen through literature and film. Representative works related to historical and intellectual developments in modern Germany. Novelistic and cinematic treatment of similar material.

3610. GERMAN AUTHORS OR TOPICS IN TRANSLATION. (4 cr per qtr [12 cr max]; requires no knowledge of German)

Study in depth of authors or topics from various periods in German literature.

3641. INTRODUCTION TO GERMAN FOLKLORE. (4 cr; requires no knowledge of German; offered through Extension)

The traditional folklore genres; charms (magic), legends, fairy tales, ballads.

3702. BEGINNING MIDDLE HIGH GERMAN.

(4 cr; prereq 3104, 3105, for jrs or srs)

Middle High German grammar. Selected literary texts.

3703. INTRODUCTION TO OLD HIGH AND LOW GERMAN. (4 cr; prereq 3702, Ling 3001 or 5001 or #)

Biographies, charms, heroic poetry, and miscellany from the 9th and 10th centuries.

3704. GERMAN DIALECTS. (4 cr; prereq 3702, 3703 or #)

Contemporary regional dialects, recorded on tape and in written texts. Synchronic and diachronic analysis.

3705. CHARACTERISTICS OF THE GERMANIC LANGUAGES. (4 cr; prereq 3702, 3703, 3704 or #)

German and Northsea Germanic; West, North, and East Germanic; Proto-Germanic and Indo-European.

3970. DIRECTED STUDIES. (1-5 cr; prereq #)

Guided individual reading or study.

Courses at the 5xxx level are open to juniors and seniors upon recommendation of advisers.

5011. ADVANCED COMPOSITION AND CONVERSATION. (4 cr; prereq 3013 or equiv)**5016. ADVANCED TRANSLATION: THEORY AND PRACTICE.** (4 cr; prereq 3016 or #)

Translation theory, related issues in stylistics, philosophy of language; sample translations; student production of translations, with methodological commentary.

5101, 5102. THE ANALYSIS OF GERMAN. (4 cr per qtr)

5101: Phonology and morphology of modern German.
5102: Syntax of modern German.

5103. THE ANALYSIS AND TEACHING OF GERMAN. (1 cr; prereq #; S-N only)

Teaching theory and practice.

5510. TOPICS IN CONTEMPORARY GERMAN CULTURE. (4 cr per qtr [8 cr max]; prereq 3513 or equiv)

A single topic of contemporary German culture explored in depth to develop a methodology of *Landeskunde*. Taught in German.

5621. GERMAN CINEMA FROM CALIGARI TO HITLER. (4 cr; prereq 3xxx-level film studies course or #; may be applied toward German major or minor if part of reading done in German)

German cinema from its beginnings, through its golden age in the 1920s, until the end of the Weimar Republic in 1933. Includes Expressionism and New Objectivity. Leading directors: Rye, Wiene, Lubitsch, Murnau, Lang, Pabst.

5622. NAZI AND POSTWAR GERMAN CINEMA. (4 cr; prereq 3xxx-level film studies course or #; may be applied toward German major or minor if part of reading done in German)

German cinema, 1933-1962: Nazi cinema, including Riefenstahl, Harlan, Sirk; continuities (e.g. Harlan) and discontinuities (e.g. Staudte's work in East and West Germany) in postwar cinema.

5623. NEW GERMAN CINEMA. (4 cr; prereq 3xxx-level film studies course or #; may be applied toward German major or minor if part of reading done in German)

West German cinema, 1962 to the present: from early acclaim in the mid-1960s (Schlöndorff, Kluge) to the attainment of international stature by the mid-1970s (Herzog, Fassbinder, Wenders, von Trotta); feminist and avant-garde films; the crisis of the 1980s.

5624. GDR CINEMA. (4 cr; prereq 3xxx-level film studies course or #; may be applied toward German major or minor if part of reading done in German) History of the East German cinema, beginning with Staudte's work in the 1940s, through "socialist realism" in the 1950s, and the development of the more critical and sophisticated cinema of the 1970s and 1980s (e.g., Wolf, Beyer).

5630. TOPICS IN GERMAN CINEMA. (4 cr per qtr [8 cr max]; prereq 3xxx-level film studies course or #; may be applied toward German major or minor if part of reading done in German) Topic chosen may focus on specific directors, formal or political characteristics, film production or reception, and/or other film-theoretical issues.

5711, 5712. HISTORY OF THE GERMAN LANGUAGE. (4 cr per qtr)

Internal and external history. Changes in the sounds, grammar, and vocabulary of German and its dialects as manifested in texts from A.D. 750 to the present.

5721-5722. MIDDLE HIGH GERMAN LANGUAGE. (4 cr per qtr)

Fluent reading of normalized Middle High German texts. Reading and analysis of non-normalized texts. Formal description of Middle High German phonology, morphology, syntax.

5731-5732. OLD HIGH GERMAN. (4 cr per qtr)

Reading and analysis of Old High German texts. Formal description of Old High German phonology, morphology, syntax.

5734. OLD SAXON. (4 cr)

Reading and analysis of Old Saxon texts. Formal description of Old Saxon phonology, morphology, syntax.

5740. READINGS IN PHILOLOGY. (4 cr per qtr [12 cr max])

Reading of new and/or old research on some single topic in the structure of the historical and/or contemporary Germanic languages.

5771. EARLY NEW HIGH GERMAN. (4 cr)

Reading and analysis of Early New High German texts. Formal description of Early New High German phonology, morphology, syntax.

5781, 5782. VARIETIES OF MODERN GERMAN. (4 cr per qtr; prereq 5101, 5102 or #)

5781: Regional varieties. 5782: Social varieties. Lexical, syntactic, and phonological variations examined using contemporary methods of dialectology and sociolinguistics.

5970. DIRECTED STUDIES. (1-5 cr per qtr; prereq #)

Guided individual reading or study.

Major Requirements and Course Descriptions

Dutch (Dtch)

0221-0222. DUTCH FOR READING AND LISTENING. (no cr; S-N only; offered through Extension)

Students develop a reading and listening knowledge of Dutch to carry out research projects and to comprehend lectures at a Dutch-speaking university.

1101-1102-1103. BEGINNING DUTCH. (5 cr per qtr, §1110)

Emphasis on proficiency according to the national ACTFL system. All four language modalities (listening, reading, speaking, writing): sequential emphasis beginning with the reception modalities, listening and reading, followed by the production modalities, speaking and writing.

1104-1105-1106. INTERMEDIATE DUTCH. (5 cr per qtr; prereq 1103 or #)

Emphasis on proficiency according to the national ACTFL system. All four language modalities (listening, reading, speaking, writing) at the intermediate and advanced levels on the ACTFL scale.

1110f, w.s. BEGINNING DUTCH: INDIVIDUALIZED READING, LISTENING, WRITING. (1-15 cr [15 cr max, first 3 cr must be completed as a unit], §1101-1102-1103; offered through Extension)

Structure, writing, and comprehension. Students work at own pace with book, computer, and audio tapes, earning credit as they progress through material. Teacher available for consultation and testing. Continuation course is 1104.

3011-3012. CONVERSATION AND COMPOSITION. (4 cr per qtr; prereq 1106 or #)

Spoken Dutch, composition, development of vocabulary, grammar review.

3310. STUDIES IN DUTCH AUTHORS. (4 cr per qtr; prereq 1103 or 15 cr of 1110 or #)

One author studied in depth.

3510. TOPICS IN DUTCH CULTURE. (4 cr per qtr; no knowledge of Dutch required)

Single topic of Dutch culture explored in depth.

3610. DUTCH AUTHORS IN TRANSLATION. (4 cr per qtr; no knowledge of Dutch required)

One author studied in depth.

3970. DIRECTED STUDIES. (1-5 cr; prereq 1106 or #)

Guided reading in or study of Dutch literature, culture, or advanced language skills.

Health Sciences

Courses appearing in the *CLA Bulletin* are approved for CLA credit. However, CLA students may take up to 28 credits of coursework offered by other colleges. The credits may be applied toward CLA de-

grees, and in some cases may be used to fulfill general education requirements. Consult your college office adviser for a list of courses from other colleges approved for general education requirements.

Descriptions of courses in the health sciences can be found in the bulletins of the several health sciences programs. Courses in biometry (School of Public Health), microbiology (Medical School), and physiology (Medical School) are listed in this bulletin and are approved for CLA credit.

Information about requirements for entering health sciences programs can be found in the third section of this bulletin.

Hebrew

See Classical and Near Eastern Studies.

Hindi

See Institute of Languages and Literatures.

History (Hist)

Staff—Chair, Sara Evans, 614a Social Sciences Building; **Associate Chair,** William D. Phillips, 614b Social Sciences Building; **Director of Undergraduate Studies and Honors,** Richard Rudolph, 672 Social Sciences Building; **Director of Graduate Studies,** David Kieft 1991-92, Ann Waltner, 1992-93, 633 Social Sciences Building

Professors: Altholz, Bachrach, Berman, Brauer, J. Evans, S. Evans, Farah, Farmer, Good, Hanawalt, Howe, Isaacman, Kelly, Kopf, Lehmsberg, Marshall, Maynes, Metcalf, Menard, Munholland, Murphy, Noble, Noonan, C. Phillips, W. Phillips, Reyerson, Rudolph, Samaha, Schwartz, Stavrou, Taylor, Thayer, Tracy, Vecoli, Wright

Associate Professors: Brooks, Green, Kieft, McCaa, Pomata, Ruggles, Spear, Valdes, Waltner

Assistant Professors: Norling, O'Brien, White

Course offerings in the Department of History cover the history of humankind to the present day.

General Education—History courses numbered 1xxx, 3xxx, and 5000 to 5500 serve the needs of nonmajors as well as majors. Courses numbered between 5000 and 5500 are open to advanced undergraduate and graduate students with little or no previous work in the subject. Courses numbered above 5500 are proseminars (reading seminars) intended primarily for graduate students, honors undergraduates, and others with a specialized interest in the subject.

Internship Opportunity—The department offers internships for majors and nonmajors through the Ramsey County Historical Society, the Minnesota Historical Society, and other agencies in the metropolitan area. Internships are self-directed and arranged by the student on an individual basis with the agency involved. Students gain practical experience in research, exhibits, site interpretation, cataloging, and other public history activities. Contact the Undergraduate Studies Office for further information.

Study Abroad—The department encourages students to incorporate an overseas study experience into their undergraduate program. Appropriate credits from such study can be applied toward a history major or minor. For information on options and procedures, see Foreign Study.

B.A. Major Sequence

If you are considering a major in history, you should consult with advisers in the Undergraduate Studies Office.

Transfer students majoring in history must complete 3955 and 3961 and at least four additional 3xxx-5xxx courses at the University of Minnesota.

No courses may be taken S-N. Courses in which D grades are earned may not be applied toward the major.

Preparatory Courses—Three introductory courses, usually 1xxx courses completed during the first two years of college. Juniors and seniors fulfill this requirement by completing 3xxx equivalents of the survey courses or they may petition to take other advanced courses instead.

Advanced Courses—Minimum of 10 3xxx and 5xxx courses, to include:

3955 (Introduction to Historical Research) taken before 3961; honors students must take Hist 3951-3952 in lieu of 3955

3961 (Major Paper) completed during sr yr; honors students must take a 2- or 3-qr proseminar with a 55xx or higher designator in lieu of 3961

All students must preregister for Hist 3955 and Hist 3961 in the Undergraduate Advising Office at least two quarters before taking the courses. See the undergraduate advisers to preregister for both courses.

Distribution Requirements—Through the 13 1xxx, 3xxx, and 5xxx courses, you must fulfill both of the following distribution requirements:

1. Chronological: At least two courses from the premodern and two courses from the modern period

2. Geographical: At least one course in each of three different geographical areas

Language Requirement—If you are planning graduate work in history, you should acquire a reading knowledge of one or more languages early in your undergraduate career.

The University's *Undergraduate Handbook* is available from the Undergraduate Studies Office, 672 Social Sciences Building (612/624-5227).

Minor Sequence

Minor Requirements—Five courses in at least two different cultural areas with no more than two courses applied to satisfy requirements for the major; four of these courses must be at the 3xxx or 5xxx level

The minor program must be approved by the Director of Undergraduate Studies.

No courses may be taken S-N. Courses in which D grades are earned may not be applied toward the minor.

Transfer students minoring in history must complete at least two courses at the University of Minnesota.

Major Requirements and Course Descriptions

Students using history courses to satisfy requirements in another major can only apply such courses toward a minor in history.

Introductory

1011, 1012, 1013. INTRODUCTION TO WORLD HISTORY. (5 cr per qtr, §Hist 1011H, 1012H, 1013H) Staff

1011: World civilizations compared to 1550, ways of life: agriculture, herding, commerce, artisans, communities, their traditions and development, city states, nomadic federations, kingdoms and empires; world religions and their spread; regional trading systems. Examples drawn from Africa, Asia, Europe, and the Americas. *1012:* World civilizations in the era of global contact, 1450 to 1960. Linking the globe through trade and migration; cultural, racial, and religious contact and clash in the Americas, Asia, and Africa; family farms to plantation agriculture; European industrialization, individualism, nationalism, and imperialism; independence movements, decolonization, and the colonial heritage. *1013:* The world today and its recent past. War and Cold War; expansion of the American and Soviet economic, political, and cultural systems, dominant culture and minority questions; contemporaneous developments in the Third World; global order; movements for peace, ecology, and human rights.

1021, 1022, 1023. INTRODUCTION TO WESTERN CIVILIZATION. (5 cr per qtr, §Hist 1021H, 1022H, 1023H) Staff

1021: Ancient Near East, Greece, Rome. *1022:* Medieval Europe from the end of Antiquity to the Renaissance. *1023:* Modern Europe from the Reformation to the present.

1301, 1302. AMERICAN HISTORY. (5 cr per qtr, §1301H, §1302H) Staff

1301: Colonial era and early national period from the Revolution through Civil War and Reconstruction. *1302:* Modern America from 1880 to the present.

1305. CULTURAL PLURALISM IN AMERICAN HISTORY. (4 cr) Staff

Survey of the development of American society focusing on the role of Afro-Americans, American Indians, Asian Americans, and Hispanic Americans. Concepts of cultural pluralism, racism, and inter-group relations explored within a comparative historical framework.

3051, 3052, 3053. ANCIENT CIVILIZATION. (4 cr per qtr) J Evans, Kelly

3051: History and civilization of the ancient world to 500 B.C. *3052:* History and civilization of the ancient world, 500-146 B.C. *3053:* History and civilization of the ancient world, 146 B.C. to A.D. 337.

3101. INTRODUCTION TO MEDIEVAL HISTORY. (4 cr, §Hist 1022) W Phillips

Europe from the decline of Rome to the early Renaissance: politics, institutions, society, economy, and culture of the Middle Ages.

3151. ENGLISH HISTORY TO THE 17TH CENTURY. (4 cr) Altholz, Lehmborg

The Anglo-Saxons and Normans; development of English law in Parliament; Reformation and constitutional crisis.

3152. ENGLISH HISTORY FROM THE 17TH CENTURY TO THE PRESENT. (4 cr) Altholz, Lehmborg

Civil War, revolution, and constitutional settlement; Industrial Revolution, democracy, and welfare state.

3401. SURVEY OF LATIN AMERICAN HISTORY: COLONIAL PERIOD TO THE PRESENT. (4 cr, §LAS 3401) McCaa, Schwartz

Pre-Hispanic and colonial period to 1800, with emphasis on social, cultural, and economic aspects.

3402. SURVEY OF LATIN AMERICAN HISTORY: 1800-1929. (4 cr, §LAS 3402) McCaa, Schwartz

Development of new nations from independence to the emergence of dependent economies.

3403. SURVEY OF LATIN AMERICAN HISTORY: 1929 TO THE PRESENT. (4 cr, §LAS 3403) McCaa, Schwartz

Contradictions of modern societies: economic expansion, dependency, population growth and the social crisis, democratic and authoritarian politics.

3431. HISTORY OF AFRICA TO 1800. (4 cr) Isaacman, White

Socioeconomic, political, and cultural development in pre-colonial Africa; emphasis on slave trade, Islamic revolution, and European commercial penetration.

3432. HISTORY OF AFRICA: 1800 TO THE PRESENT. (4 cr) Isaacman, White

Colonial rule, the forced restructuring and underdevelopment of African economies, African resistance, nationalism, and the problems of independence.

3461. INTRODUCTION TO EAST ASIA: EARLY CIVILIZATION. (4 cr, §EAS 1461) Marshall, Taylor, Waltner

Rise and fall of the first great Chinese empire (Han) and the early history of Vietnam, Korea, and Japan. Origins and development of Chinese society, government, and thought and the introduction of Buddhism from India.

3462. INTRODUCTION TO EAST ASIA: THE IMPERIAL AGE. (4 cr, §EAS 1462) Marshall, Taylor, Waltner

Historical survey of early Japan, medieval Vietnam, Korea, and China from the Tang empire until the end of the 18th century. Diffusion of Chinese and Buddhist cultural forms and maturation of distinctive societies in China, Japan, Vietnam, Korea.

3463. INTRODUCTION TO EAST ASIA IN MODERN TIMES. (4 cr, §EAS 1463) Farmer, Marshall
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.

Honors

1010H. FRESHMAN-SOPHOMORE HONORS RESEARCH COLLOQUIUM. (4 cr, §HCol 1010) Staff
Introduction to specific history topics offering lower division honors students an intensive experience in historical research. Instruction by history faculty in seminars limited to 15 students.

1011H, 1012H, 1013H. HONORS COURSE: INTRODUCTION TO WORLD HISTORY. (5 cr per qtr, §1011, §1012, §1013; prereq #; not open to jr or sr) Staff
For description, see 1011, 1012, 1013.

1021H, 1022H, 1023H. HONORS COURSE: INTRODUCTION TO WESTERN CIVILIZATION. (5 cr per qtr, §1021, 1022, 1023; prereq #; not open to jr or sr) Staff
For description, see 1021, 1022, 1023.

1301H, 1302H. HONORS COURSE: AMERICAN HISTORY. (4 cr per qtr, §1301, §1302; prereq #) Staff
For description, see 1301, 1302.

3951f-3952w†. HONORS COURSE: HISTORY. (4 cr per qtr; prereq candidacy for honors in history, #)
Seminar in philosophy of history, historiography. Recommended for junior year for those seeking honors in history.

General, Methodological, and Comparative Studies

3031, 3032, 3033. MEDICINE AND DISEASE IN HISTORY. (4 cr per qtr, §HMed 3001, §HMed 3002, §HMed 3003) Eyler
Intellectual and social history of medicine in Europe and America. *3031:* Classical antiquity through mid-17th century. *3032:* Mid-17th through mid-19th centuries. *3033:* Modern medicine in America.

3200. CONTEMPORARY PROBLEMS IN HISTORICAL PERSPECTIVE. (4 cr per qtr) Staff
Comparative treatment of a contemporary problem (e.g., urbanization, social change, nationalism, intercultural conflict, revolution) in historical perspective.

3421, 3422. THE WORLD AND THE WEST. (4 cr per qtr) Kopf, Tracy
Survey of the political, economic, and cultural interaction among the peoples of Europe, Africa, America, and Asia. *3421:* Era of Western dominance, 1500-1850. Sea power, colonialism, imperialism. *3422:* Modern world of Renaissance, nationalism, modernization, and countermodernization, 1850 to present.

3797. LIFE AGAINST DEATH: POPULATION CRISES IN THE PAST. (4 cr) Maynes, McCaa, C Phillips, Ruggles

Interaction between social customs and population processes (family, sex, fertility, migration, aging, death) from prehistoric times to the present in Europe and the Americas, emphasizing demographic responses to changing environmental, technological, and political circumstances.

3955. INTRODUCTION TO HISTORICAL RESEARCH. (4 cr; prereq Δ; priority given to history majors; take before 3961) Staff
Practical course. Use of documents and different kinds of historical writing. Students read and discuss materials representative of contrasting historical perspectives. Faculty guidance in sections limited to 15 students.

3960. INTERNSHIP. (4-5 cr per qtr [10 cr max]; prereq #, Δ) Staff
Internship with historical society, government, or community organization, arranged through and supervised by department.

3961. MAJOR PAPER. (5 cr; prereq Δ)
Required of history majors, usually taken in senior year. Research papers on topics students choose; work largely with original materials (printed documents, memoirs, literature). Sign up in Undergraduate Advising Office.

3970. DIRECTED STUDIES. (1-15 cr per qtr; prereq #)
Guided individual reading or study. Open to qualified students for one or more quarters.

3990. DIRECTED RESEARCH. (1-15 cr per qtr; prereq #)
Qualified students, with consent of instructor, work on a tutorial basis.

3991-3992†. UNDERGRADUATE SEMINAR IN HISTORY. (4 cr per qtr; prereq jr or sr history major, Δ) Staff
Specific history topics offering upper division history majors an intensive experience in historical research. Limited to 15 students.

5011. QUANTITATIVE METHODS IN HISTORICAL RESEARCH. (4 cr; prereq #) McCaa, Menard, Ruggles
Quantitative approaches to historical problems. Data collection, questions of measurement, analytical techniques, and rudimentary statistics, as they apply to historical research. Relationship of quantitative inferences to nonquantitative procedures emphasized.

5429. SLAVERY IN THE AMERICAS. (4 cr) Isaacman, Menard, Schwartz
Comparative history of slavery, concentrating on the slave regimes in the United States, Latin America, and the Caribbean; slavery as both an economic and a social system.

Major Requirements and Course Descriptions

African History

5436. SOCIAL HISTORY OF AFRICAN WOMEN: 1850 TO THE PRESENT. (4 cr; prereq #) White
Examination of recent scholarship in African women's social history, undertaken from various perspectives and employing as well as testing differing frameworks of historical analysis for the African continent.

5445. PROBLEMS IN CENTRAL AND SOUTHERN AFRICAN HISTORY. (4 cr; also open to sophs who have passed 3431, 3432) Isaacman, White
The nature and process of change in pre-colonial, colonial, and independent Central and South Africa.

5447. PROBLEMS IN EAST AFRICA. (4 cr) Isaacman, White
Advanced course. Focus on specific themes and methodological problems.

American History

3347. WOMEN IN COLONIAL AND VICTORIAN AMERICA: 1600-1890. (4 cr; offered through Extension) S Evans

The female experience in U.S. history to 1890: work, family, images, sexuality, feminism; impact of race and class.

3348. WOMEN IN MODERN AMERICA: 1890-1980. (4 cr) S Evans

Women in the United States from the late Victorian era to the present: changes in labor force participation, family patterns, sexuality, education, feminism; images of women from Gibson girl to feminine mystique.

3351. AMERICAN MARITIME HISTORY. (4 cr) Norling

Survey of American maritime history from the contact period to the present. Maritime activities in social, economic, and political development; emphasis on the changing work experience of and diversity within the maritime community.

3801. THE PEOPLE OF EARLY AMERICA TO 1750. (4 cr; offered alt yrs) Menard, Ruggles

Multicultural approach to early American history focusing on the interactions of Africans, Europeans, and American Indians who came together to create a new world in North America during the 16th, 17th, and 18th centuries.

3809. THE BEGINNINGS OF AMERICAN POLITICS: 1607-1787. (4 cr; offered alt yrs) Howe

Origins of government and politics in 17th-century British America; maturing of regional political systems in the 18th century; connections between society and politics; political transformation in the Revolutionary Era; origins of national politics and the Constitution.

3811. POLITICS AND SOCIETY IN THE EARLY REPUBLIC: 1788-1848. (4 cr; offered alt yrs; offered through Extension) Howe

Beginning the new government; the first party system; Jefferson and the Virginia dynasty; political transformation in the states and emergence of mass politics; Jackson, the Whigs, and the second party system; slavery, race, and rise of southern sectionalism; abolitionism and reform; Indian removal, westward expansion, and the frontier; manifest destiny and Mexican War; collapse of the second party system.

3812. CIVIL WAR AND RECONSTRUCTION.

(4 cr) Howe, Noble

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, Douglass, 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.

3821. UNITED STATES IN THE 20TH CENTURY: 1890-1917. (4 cr; offered through Extension) Berman, Noble, Spear

The closing of the agricultural frontier and the growth of industrialism, the corporation, and the city; populism and progressivism; the end of isolation and the growth of overseas empire; prohibition and women's suffrage.

3822. UNITED STATES IN THE 20TH CENTURY: 1932-1960. (4 cr) Berman, Noble, Spear

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.

3823. UNITED STATES IN THE 20TH CENTURY: 1960 TO THE PRESENT. (4 cr) Berman, Brauer, Spear

The conflicts of the 1960s; the New Frontier and Great Society, the black struggle for freedom; the Vietnam War; the new left and counterculture; the women's movement and gay liberation; Watergate and the uncertainties of the 1970s; the Reagan counterrevolution.

3834, 3835. HISTORY OF CIVIL LIBERTIES AND CIVIL RIGHTS IN THE UNITED STATES. (4 cr per qtr) Murphy

The conceptual and institutional development of liberty, equality, and justice in America, and subsequent application or nonapplication of these principles throughout our national history. *3834*: English background through pre-industrial society. *3835*: The role of civil liberties and civil rights in modern America.

3837. MINNESOTA HISTORY. (4 cr) Berman, Spear, staff

Topics in political and social history of Minnesota and its region in 19th and 20th centuries.

3841. AMERICAN BUSINESS HISTORY. (4 cr) Green
Development of the modern corporation and its managerial structure. Contributions of Eli Whitney, Edison, Ford, Carnegie, Rockefeller, J. P. Morgan, Alfred Sloan, others. History of relation of business to economic development, social change, politics, and government policies.

3844. AMERICAN ECONOMIC HISTORY, COLONIAL PERIOD TO CIVIL WAR. (4 cr) Green
Economic development, regional specialization, and early industrialization. Slavery and southern development. The role of railroads and government policies. Economic impact of the Civil War.

3845. AMERICAN ECONOMIC HISTORY: 1870 TO PRESENT. (4 cr) Green
Farm problems in the 19th century. Rise of big business and finance capitalism. The 1920s economy and the Great Depression. Corporate capitalism, government policies, and modern society.

3851. AMERICAN LABOR HISTORY IN THE 19TH CENTURY. (4 cr) Berman
The development of an American working class from the pre-industrial to the industrial age. Responses of American workers through strikes, labor organization, and political reform. The rise and fall of the Knights of Labor, formation of the American Federation of Labor, and challenge of Marxism and anarchism.

3852. AMERICAN LABOR HISTORY IN THE 20TH CENTURY. (4 cr) Berman
The development of American labor in a mature industrial society. Industrial unionism and radicalism's challenge to the AFL; the IWW, the CIO, and organized labor's integration into American society. From Gompers and Debs through John L. Lewis and Earl Browder to George Meany and Hubert Humphrey.

3861, 3862. EUROPEAN AMERICANS: FROM IMMIGRANTS TO ETHNICS. (4 cr per qtr; offered alt yrs) Vecoli
Trans-Atlantic migrations, 17th to 20th centuries; formation of ethnic communities and cultures; nativism and ethnic conflict; assimilation, cultural maintenance, and social mobility; emergence of a pluralistic America. *3861*: To 1890. *3862*: Since 1890.

3864. AFRO-AMERICAN HISTORY. (4 cr, §Afro 3864) Staff
From African background to Reconstruction period.

3865. AFRO-AMERICAN HISTORY. (4 cr, §Afro 3865) Staff
From Reconstruction period to present.

3867. AMERICAN JEWISH HISTORY. (4 cr) Berman
Jews in the United States from the colonial period to the present; migration patterns, economic adjustment, social arrangements, political participation, cultural and religious diversity. Intergroup contacts, anti-Semitism, and formation of voluntary communal associations viewed in the context of the American historical experience.

3868. ASIANS IN AMERICA: AN ETHNIC PERSPECTIVE. (4 cr, §EAS 3868) Tschida
Experience of Asians in the United States from 1850 to the present examined from the perspective of a minority.

3871. AMERICAN INDIAN HISTORY. (4 cr, §AmIn 3111) O'Brien
Pre-contact to 1830. Colonization and survival of North American Indians from rise of ancient American Indian civilizations to the Removal era.

3872. AMERICAN INDIAN HISTORY: 1830 TO THE PRESENT. (4 cr, §AmIn 3112) O'Brien
American Indian communities from Removal era to the present, emphasizing native initiatives and adaptations in the face of federal policies.

3881, 3882, 3883. HISTORY OF AMERICAN FOREIGN RELATIONS. (4 cr per qtr) Brauer
3881: Foreign policy and diplomacy during period America sought independence through territorial expansion, 1760-1865. *3882*: America's commercial expansion, involvement in war, and imperialism, 1865-1945. *3883*: American foreign relations during the Cold War, 1941 to present.

3910. TOPICS IN AMERICAN HISTORY. (4 cr; offered through Extension) Staff
Selected topics of interest to students of history and of civilization in the United States and its constituent elements. Topics deal with cultural, social, economic, and political concerns.

5331, 5332. AMERICAN CONSTITUTIONAL HISTORY. (4 cr per qtr) Murphy
The origins and development of constitutional government in America, with emphasis on the role of constitutional politics in the evolution of public policy. *5331*: English and colonial background through Reconstruction period. *5332*: The Constitution and the rule of law in modern America.

5334. AMERICAN LEGAL HISTORY. (4 cr) Murphy
History of American law, from English antecedents, American reception, Americanization, and development of American legal institutions and legal culture through rise and decline of legal realism.

5349. SOCIAL WELFARE IN AMERICA. (4 cr) Chambers
Advanced survey of social services, public policies, and the profession of social work, colonial era to present. Issues include dependency, deviancy, crime, social security, public health, social reform, the functions of public and voluntary institutions (charities, settlements).

5389. RUSSIAN-AMERICAN RELATIONS: 1917 TO THE PRESENT. (5 cr; prereq #) Brauer, Brooks
Russian-American relations since the Russian Revolution; political, diplomatic, economic, and military problems; American foreign policy.

Major Requirements and Course Descriptions

Ancient History

3509. MILITARY HISTORY OF THE ANCIENT WORLD. (4 cr) Kelly

Conduct of war in the ancient Near East, Greece, and Rome. The importance of warfare in the political, economic, and social development of ancient societies.

3515. THE HISTORIANS OF GREECE AND ROME. (4 cr) J Evans, Kelly

Origins and development of historical thought in the ancient world.

3551. HISTORY OF THE ANCIENT NEAR EAST. (4 cr; offered alt yrs) Staff

History of the ancient Near East from earliest times to 323 B.C.

3552. ANCIENT EGYPT. (4 cr) J Evans

History of Egypt from earliest times to 323 B.C.

5061. HISTORY OF GREECE TO 600 B.C. (4 cr)

Kelly
Political, economic, and social developments from the first appearance of the Greeks to circa 600 B.C.

5062. HISTORY OF GREECE: 600-400 B.C. (4 cr)

Kelly
The birth and development of democracy in Athens and militarism of Sparta; birth and development of philosophical and historical thought; development of the Athenian empire; the Peloponnesian War between Athens and Sparta.

5063. HISTORY OF GREECE: 400-200 B.C. (4 cr)

Kelly
Spartan, Theban, and Macedonian hegemony; Alexander the Great and the Hellenistic monarchies to 200 B.C.

5071, 5072, 5073. HISTORY OF ROME. (4 cr per

qtr) J Evans
5071: To 133 B.C. 5072: 133 to 31 B.C. 5073: 31 B.C. to A.D. 235.

History of Asia and the Middle East

3450. TOPICS IN SOUTHEAST ASIAN HISTORY.

(4 cr; offered through Extension) Farmer, Kopf, Taylor
Topics may include history of Vietnam and the Vietnamese War, origins of colonialism and nationalism in Southeast Asia.

3464. EARLY MODERN CHINA: 1350-1750. (4 cr, §5464, §EAS 3464) Farmer, Waltner

The Ming and early Ch'ing empires; expulsion of the Mongols and centralization of imperial power; the high point of Confucian bureaucratic rule, commercial development, philosophical innovation, popular fiction, the Manchu conquest, and early Western contacts.

3465. CHINA'S RESPONSE TO THE WEST: 1750-1911. (4 cr, §5465, §EAS 3465; offered through Extension) Farmer, Waltner

Eighteenth-century demographic crisis; the growth of Western trade, opium wars, and peasant rebellion; early reform efforts, cultural conflicts with the West, imperialism in China, and the first phase of the Chinese revolution.

3467. THE NATIONALIST REVOLUTION IN CHINA: 1900 TO PRESENT. (4 cr, §5467, §EAS 3467) Farmer

Failure of the early republic, warlordism, the new culture movement, and the development of Chinese nationalism. The rise of the Nationalist Party and intervention of the Soviet Union, Japan, and the United States. Taiwan and the People's Republic of China.

3468. PEOPLE'S REPUBLIC OF CHINA: THE COMMUNIST REVOLUTION, 1900 TO THE PRESENT. (4 cr, §5468, §EAS 3468) Farmer

Introduction of Marxism to China, rise of Communist Party, and development of a rural guerrilla movement. The career of Mao Tse-tung and developments in the People's Republic: The Great Leap, Cultural Revolution, Gang of Four.

3471. 20TH-CENTURY JAPAN. (4 cr, §EAS 3471) Marshall

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.

3474. RISE OF MODERN JAPAN: 1853-1914. (4 cr, §EAS 3474) Marshall

The Meiji Revolution from Commodore Perry to eve of World War I: origins of constitutional monarchy, industrial economy, Western influence, and modern cultural change.

3480. TOPICS IN THE HISTORY OF INDIA. (4 cr) Kopf

Examination of a problem in South Asian history. Topics vary from year to year and may include Gandhi; family, caste, and ethnicity; popular culture; intellectual institutions; work.

3481. CLASSICAL AND HINDU INDIA. (4 cr) Kopf

History of Brahmanism, Buddhism, and Hinduism before the advent of Islam in 1200.

3484. HISTORY OF SOUTHEAST ASIA. (4 cr)

Kopf
Development of societies and states in Asian regions bordered by the cultural and political spheres of China and India.

3488, 3489. MODERN INDIA. (4 cr per qtr) Kopf
South Asia under British rule and rise of independent nation-states. *3488*: Fall of Mughal empire; Clive, Hastings, and the British conquest of India; Orientalism and Indian renaissance; the 1857 rebellion. *3489*: Rise of the nationalist movement; Muslim separatism; Gandhi and Nehru; economic and social change; contemporary India.

3491. CLASSICAL HERITAGE OF ARAB ISLAM.
(4 cr) Farah

Legacy of Arab contribution in institutions, letters, arts, sciences, thought, mathematics, architecture, to Islam's efflorescence; points of contact with the transmission to Europe; crusades, Spain, Sicily. The role of Arab Islam in shaping Islamic civilization, 650-1350.

3505. SURVEY OF THE MIDDLE EAST. (4 cr)
Farah

Lands and peoples of the Middle East, historical evolution of Middle East civilizations and societies, the status of Middle East countries in world affairs.

3541, 3542, 3543. HISTORY OF THE ARABS. (4 cr per qtr, §MidE 3541, §MidE 3542, §MidE 3543) Farah
3541: From pre-Islamic days to downfall of Umayyads of Damascus. *3542*: From Abbasids to fall of Baghdad in 1258. *3543*: From Crusades to present.

3544. THE ARAB WORLD IN RECENT TIMES.
(4 cr, §MidE 3544; offered through Extension) Farah
Central Arab lands (the Arabian peninsula, Iraq, Syria, Jordan, Lebanon, Egypt) and North African region (Libya, Tunisia, Morocco, Algeria) from end of World War I to the present. Foreign occupation and struggle for independence, position in regional and international politics.

3547. HISTORY OF THE OTTOMAN EMPIRE.
(4 cr) Farah

History and institutions of the Ottoman Empire from its inception in 1300 until its demise in 1920; includes both Asiatic and European provinces; relations with other powers in Europe and Asia; its role in world affairs.

5461. ANCIENT CHINA. (4 cr) Taylor
Origins of Chinese civilization, classical philosophies, and the Han empire (to A.D. 220).

5462. BUDDHIST CHINA. (4 cr) Taylor
Disintegration of Han empire; aristocratic society; barbarian invasions; spread of Buddhism and reintegration of the empire in T'ang period (220-906).

5463. RENAISSANCE CHINA. (4 cr) Taylor, Waltner
Disappearance of medieval aristocracy; commercial and maritime expansion; neo-Confucian renaissance; growth of Chinese science and technology; Mongol conquest and Yuan dynasty.

5464. EARLY MODERN CHINA: 1350-1750. (4 cr, §3464, §EAS 3464) Farmer, Waltner
For description, see 3464.

5467. THE NATIONALIST REVOLUTION IN CHINA: 1900 TO PRESENT. (4 cr, §3467, §EAS 3467) Farmer

For description, see 3467.

5468. PEOPLE'S REPUBLIC OF CHINA: THE COMMUNIST REVOLUTION, 1900 TO THE PRESENT. (4 cr, §3468, §EAS 3468) Farmer

For description, see 3468.

5473. FAMILY, SCHOOL, AND WORK IN MODERN JAPANESE HISTORY. (4 cr) Marshall

Impact of industrialization on family, life, economic role of women, educational opportunities and curriculum, and the work ethic and the Japanese employment system in the 19th and 20th centuries.

British History

3641. ANGLO-SAXON ENGLAND: FROM KING ARTHUR TO WILLIAM THE CONQUEROR. (4 cr; offered through Extension) Bachrach

History of medieval England from the end of Roman rule to the Norman Conquest. All aspects of society examined to provide a broad picture of the creation of Anglo-Saxon England and the Celtic frontiers.

3642. KNIGHTS, PEASANTS, AND BANDITS IN MEDIEVAL ENGLAND. (4 cr) Hanawalt

Social history of medieval England from the Norman Conquest in 1066 to 1500. Peasants, nobility, and bourgeoisie, including their economic institutions, living conditions, and entertainments. Legal and illegal ways of coping with economic and social change resulting from plague and wars.

3651. HENRY VIII AND THE ENGLISH REFORMATION. (4 cr) Lehmborg

The early Tudor period, 1485-1547; the reign of Henry VIII and his break with the papacy.

3652. ENGLAND IN THE AGE OF ELIZABETH I. (4 cr; offered alt yrs) Lehmborg

The later Tudor period and the reign of James I, 1547-1625; the problems and achievements of Queen Elizabeth.

3653. THE ENGLISH CIVIL WAR AND RESTORATION. (4 cr) Lehmborg

The English Civil War; Oliver Cromwell and the Interregnum; the Restoration era and the Glorious Revolution (1625-1689).

3681. MODERN IRISH HISTORY. (4 cr) Altholz
History of Ireland since 1535, with emphasis on the period of the union with Britain, 1800-1922.

5171, 5172, 5173. MODERN ENGLAND: 1783 TO PRESENT. (4 cr per qtr) Altholz

5171: 1783 to 1846, the triumph of the middle class.

5172: 1846 to 1901, Victorian era. *5173*: 1901 to 1972, war and social change.

History of Continental Europe

3222, 3223. EUROPEAN SOCIAL HISTORY

THROUGH LITERATURE. (4 cr per qtr) Rudolph
Novels, short stories as sources in examining social movements, social change, patterns of class, family, and sex roles. 3222: Through the Industrial Revolution. 3223: Industrial Revolution to the present.

3244. HISTORY OF EASTERN EUROPE TO THE EARLY 19TH CENTURY.

(4 cr) Rudolph
Peoples of Poland, Czechoslovakia, Hungary, Romania, Yugoslavia, and the Ukraine, from their origins to modern times. Culture and society in Middle Ages; golden age of Eastern Europe; age of nationalism; Jews in Eastern Europe; loss and regaining of independence in modern times.

3245. HISTORY OF EASTERN EUROPE: 19TH AND 20TH CENTURIES.

(4 cr) Rudolph
Poland, Czechoslovakia, Hungary, Romania, and Yugoslavia. Nationalism and formation of national states; fascism and World War II; Jews in Eastern Europe; communist and post-communist period.

3271. THE VIKINGS AT HOME AND AWAY.

(4 cr) Metcalf
Viking society and expansion of Viking influence abroad as perceived in recent centuries and in the popular mind; Viking society at home and abroad as understood by modern researchers; Scandinavia in East-West trade.

3273. MODERN SCANDINAVIA SINCE 1807.

(4 cr) Metcalf
From agrarian periphery to vanguard welfare-state models; impact of industrialization, urbanization, and demographic expansion; social democracy and the politics of consensus.

3281, 3282, 3283. INTELLECTUAL AND CULTURAL HISTORY OF MODERN EUROPE.

(4 cr per qtr) Thayer
3281: Aesthetic, historical, and political thought from Vico to Arnold. 3282: Marxism and alternative contemporary critics of industrial and national Europe. 3283: Development of modern historicism and its critics: history and social sciences in the late 19th and 20th centuries.

3607. THE HISTORY OF THE JEWS IN MEDIEVAL EUROPE.

(4 cr) Bachrach
The institutions, thought, and major personalities of the Jewish people from the later Roman Empire until the expulsions from Western Europe.

3608. HISTORY OF THE CATHOLIC CHURCH IN THE MIDDLE AGES.

(4 cr) Bachrach, Hanawalt
The institutions, thought, and major personalities dominating the church from the later Roman Empire to the Reformation.

3609. MILITARY HISTORY OF MEDIEVAL WESTERN EUROPE.

(4 cr) Bachrach
Concept and conduct of war in Western Europe in the Middle Ages and the relation between military organization and society.

3611. MEDIEVAL CITIES OF EUROPE: 500-1500.

(4 cr) Reyerson
Evolution of Western European cities from the late Roman town to the early Renaissance city-state.

3614. WOMEN IN MEDIEVAL EUROPE: CIRCA 500-1500.

(4 cr; offered through Extension) Reyerson
Women in medieval European society from the royal court and secluded nunnery to the urban workshop and peasant hovel.

3615. WOMEN IN EUROPEAN HISTORY: 1500 TO THE PRESENT.

(4 cr) Maynes, Pomata
Women's history and gender relations in modern European history, including women and work, women and the family, the history of childbearing and sexuality, cultural images of women, women in political life.

3616. FRANCE IN THE HIGH MIDDLE AGES.

(4 cr) Reyerson
The growth of royal power during the era of the Capetian monarchy, 987-1328.

3621. RENAISSANCE ITALY: 1200-1530.

(4 cr) Pomata, Tracy
Politics and culture in the city-states from Dante to Machiavelli.

3623. THE REFORMATION IN GERMANY.

(4 cr) Tracy
The Lutheran movement and the beginnings of the Catholic Reformation.

3624. FRANCE FROM THE RENAISSANCE TO RICHELIEU.

(4 cr) Tracy
The religious wars and the growth of an absolute monarchy.

3625. FRANCE IN THE AGE OF ENLIGHTENMENT.

(4 cr) Tracy
The writings of several leading thinkers of the Enlightenment, including Montesquieu, Voltaire, and Rousseau, examined in the context of 18th-century French history.

3627. FLYING DUTCHMEN: HOLLAND IN ASIA AND AFRICA, 1600-1800.

(4 cr) J Tracy
Dutch phase of Europe's eastward expansion, in period when the Netherlands was a great naval power; course stresses interaction between European and Asian and African cultures.

3631. GERMANY AND ITS EMPIRE IN THE MIDDLE AGES.

(4 cr)
Political, institutional, social, economic, and cultural development of Germany from breakup of Carolingian Empire to Reformation. Role of German Empire in history of medieval Europe and development of territorial states in Central Europe.

3632. HISTORY OF GERMANY: REFORMATION TO REVOLUTION, 1500-1848. (4 cr) Tracy

Social and religious upheaval; warfare and demographic catastrophe; the politics of absolutism; baroque culture, everyday life in town and country; the revolution of 1848.

3633. HISTORY OF GERMANY: EMPIRE TO HITLER, 1848-1945. (4 cr) Kieft, Maynes

Unification, political and economic development, growth of socialism, World War I and revolution, the Weimar years, the Nazi seizure of power.

3636. RUSSIAN HISTORY FROM THE ORIGINS TO PETER THE GREAT. (4 cr, §5132) Noonan

A survey of Russian history: origins to Peter the Great.

3637. RUSSIAN HISTORY FROM PETER THE GREAT TO THE PRESENT. (4 cr, §5133) Stavrou

A survey of Russian history since Peter the Great.

3700. TOPICS IN EUROPEAN HISTORY. (4 cr) Staff

Topics vary and may include imperialism, psychohistory, biography in European history, urbanization.

3703. EUROPEAN CITIES: 1500-1800. (4 cr; offered alt yrs) C Phillips

Urban social classes and their daily lives, architecture, relationship between town and countryside. Featured cities: Venice, Florence, Rome, Augsburg, Madrid, Seville, Lisbon, Paris, Antwerp, Amsterdam, London.

3704. DAILY LIFE IN EUROPE: 1348-1750. (4 cr) C Phillips

Economy and society in various European countries from the Renaissance to the Industrial Revolution. Topics include court life, the nobility, peasants, artisans, marriage, family, the middle class, disease, agriculture, handicrafts, witchcraft, piracy, crime, and trade.

3707, 3708. SOCIAL AND ECONOMIC HISTORY OF MODERN EUROPE. (4 cr per qtr) Rudolph

Transformation from traditional agrarian to modern society, 18th to 20th centuries. *3707*: Social and economic change. *3708*: social change; history of the family, marriage, and sexuality.

3711, 3712. ECONOMIC HISTORY OF MODERN EUROPE. (4 cr) D Good

Long-term rise and transformation of European economy. *3711*: Emergence of capitalism and spread of modern economic growth through 19th century. *3712*: Growth, instability, and structural change in 20th century capitalism.

3714. MEDIEVAL SPAIN: 400-1500. (4 cr) W Phillips
Political, economic, and social history of the Spanish regions from late Roman times to 15th century. Geographical background. Interaction of Christian, Islamic, and Jewish cultures. Links with the Mediterranean and the Atlantic.

3715. SPAIN UNDER THE HABSBURGS: 1516-1701. (4 cr) C Phillips, W Phillips

The golden age of Spanish history. The Habsburg family, internal government, Spain and European politics, culture and society, the American empire, agriculture and commerce, daily life and social mores, reasons for Spain's decline.

3716. SPAIN FROM 1700 TO THE PRESENT. (4 cr) C Phillips, W Phillips

Modern Spain from the beginning of the Bourbon dynasty in 1700 to its restoration in 1975. The 18th-century Enlightenment, Napoleonic invasion, Carlist wars, Federal Republic, Bourbon restoration of the 19th century, republic and Civil War, Franco regime, and Bourbon restoration of the 20th century.

3721. EUROPE IN THE ERA OF WORLD WAR I. (4 cr) Munholland

Political, social, and diplomatic background of Europe on eve of World War I; origins of conflict; impact of war and revolution on European society; the peace settlement.

3722. EUROPE IN THE ERA OF WORLD WAR II. (4 cr, §3224) Munholland

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.

3723. EUROPE SINCE WORLD WAR II. (4 cr) Munholland

Reconstruction of European politics and society; emergence of Cold War in Europe; decolonization; economic cooperation and development; East-West relations.

3725. THE WORLD CONFLICT: 1931-1945. (4 cr) Staff

Social, political, and economic origins of worldwide international conflict from Great Depression to end of World War II.

3747. HABSBURG AUSTRIA FROM 1526 TO WORLD WAR I. (4 cr) Wright

Establishment of Habsburg Empire; the Reformation and Counter-Reformation in Austria and Central Europe; arts, letters, and music of the baroque; socioeconomic reforms of 18th century; French Revolution; nationalism; Austrian revolution; Ausgleich; fin de siècle.

3748. THE AUSTRIAN REPUBLIC FROM WORLD WAR I TO PRESENT. (4 cr) Wright

The First Republic; "the state no one wanted"; Anschluss and Hitler; World War II; decade of occupation; the new Austria.

3775. HISTORY OF THE EUROPEAN JEWS FROM THE MIDDLE AGES TO THE PRESENT. (4 cr) Rudolph

Social, economic, and cultural history of the Jewish people in Europe and their interaction with other peoples; history and causes of anti-Semitism; Zionism and assimilation; Hasidism and socialism.

Major Requirements and Course Descriptions

5100. SELECTED TOPICS IN MEDIEVAL

EUROPE. (4 cr; prereq #) Bachrach, Hanawalt, W Phillips, Reyerson
From the fall of the Roman Empire through the end of the Middle Ages.

5115. MEDIEVAL LATIN HISTORIANS. (4 cr; pre-

req good reading knowledge of Latin) Bachrach
The writing of history in Western Europe during the Middle Ages. The philosophy and techniques of research by medieval historians and chroniclers; history as literature; the value of medieval histories to modern research scholars. All work done with original Latin texts.

5118. SCANDINAVIA IN THE MIDDLE AGES.

(4 cr, §Scan 5118, Geog 5178) Metcalf
A team-taught interdisciplinary examination of the economic, political, and social history of Scandinavia from the late Viking period until 1500. Agrarian and urban societies; peasant and elite perspectives; growth of economic, political, religious, and social institutions.

5134. RUSSIA BEFORE THE MONGOL CON-

QUEST. (4 cr; offered alt yrs) Noonan
The origins and development of the Kievan state, 850-1240.

5135. FROM KHAN TO TSAR: RUSSIA, 1240-

1530. (4 cr; offered alt yrs) Noonan
Mongol rule of Russia, rise of Lithuania, emergence of Muscovy.

5136. FROM IVAN THE TERRIBLE TO PETER

THE GREAT: RUSSIA, 1530-1700. (4 cr) Noonan
Reign of Ivan the Terrible, the time of troubles, the great cossack revolt in the Ukraine, 17th-century Muscovy, enserfment of the peasantry.

5137. THE NOMADS OF SOUTHERN RUSSIA

FROM THE SCYTHIANS TO THE MONGOLS:
600 B.C.-A.D. 1300. (4 cr; offered alt yrs) Noonan
The nomads who occupied the Russian steppe (Scythians, Sarmatians, Huns, Avars, Bulgars, Khazars, Pechenegs, Cumans, Mongols) and their societies.

5200. TOPICS IN EUROPEAN HISTORY. (4 cr)

Staff
In-depth treatment of selected historical themes. Topics vary from quarter to quarter.

5211. FRANCE IN THE OLD REGIME. (4 cr)

C Phillips
France to the revolution of 1789.

5212. FRENCH REVOLUTION AND NAPOLEON.

(4 cr) C Phillips
The reform movement and upheavals in France to 1799; the emergence and rise to power of Bonaparte; the Napoleonic regime.

5231. MODERN FRANCE FROM 1848 TO DE-

GAULLE. (4 cr) Munholland
Survey of French society and political life from the revolution of 1848 to contemporary France.

5248. HISTORY OF POLAND, FROM ITS ORI-

GENS TO EARLY 19TH CENTURY. (4 cr) Rudolph
Various aspects of Polish history from social, economic, cultural, and political viewpoints and in broader European and world framework. Political chronology discussed in relation to economic, social, and cultural developments.

5252. DEVELOPMENT OF THE SCANDINAVIAN

WELFARE STATE. (4 cr, §Scan 5252) Metcalf
Political, social, and economic development in Scandinavia between 1870 and 1980. Why Scandinavian states have led in developing "welfare-state" policies and programs.

5264. MODERN RUSSIA: 18TH-CENTURY BACK-

GROUND. (4 cr; offered through Extension) Stavrou
Foundation of the Russian empire, modernization and expansion under Peter the Great and Catherine the Great. Russia's Europeanization.

5265. MODERN RUSSIA: 19TH CENTURY. (4 cr)

Stavrou
Political, social, and cultural developments from Alexander I to the 1905 revolution. The revolutionary movement and the consequences of the emancipation of the serfs; Russian industrialization.

5266. MODERN RUSSIA: THE 20TH CENTURY.

(4 cr) Stavrou
Fall of the Russian monarchy, revolutions, and Soviet regime.

5268. RUSSIAN AND AMERICAN POPULAR

CULTURE HISTORY. (4 cr; meets with Hist 3768)
J Brooks
Contrasts in Soviet and American culture over time. National identity, masculinity and femininity, success, notions of entertainment and holiday, concepts of legitimate and illegitimate popular expression, and cross-cultural perceptions. Sources include films and popular fiction.

5284. DIPLOMATIC HISTORY OF EUROPE:

1848-1900. (4 cr) Kieft
Bismarck; imperialism; Eastern question.

5285. DIPLOMATIC HISTORY OF EUROPE:

1900-1945. (4 cr) Kieft
The world wars.

5286. DIPLOMATIC HISTORY OF EUROPE:

1945-PRESENT. (4 cr) Kieft
The Cold War.

5294, 5295. SOCIAL HISTORY OF RUSSIA AND

EASTERN EUROPE. (4 cr per qtr) Rudolph
Lives of peasants and workers, nobles and merchants. Topics include family, marriage, sexuality; culture and tradition; work; social movements (revolutionary, women's, nationalist); socialist societies and economies and post-communist society. 5294: Through the 19th century. 5295: 20th century.

Latin American History

3411. HISTORY OF BRAZIL: 1500-1808. (4 cr) Schwartz
Colonial Brazilian development, with emphasis on social, cultural, and economic aspects; the role of slavery in Brazilian life.

3424. HISTORY OF MEXICO: PRE-COLUMBIAN PERIOD THROUGH INDEPENDENCE. (4 cr) McCaa, Schwartz, Valdés
Indian cultures of Mexico before the conquest and subsequent contact between Europeans and Indians during the formation of Mexican society.

3425. HISTORY OF MEXICO: THE 19TH AND 20TH CENTURIES. (4 cr) McCaa, Schwartz, Valdés
The struggle for land and liberty from the Hidalgo revolt to the oil age.

3426. HISTORY OF CHILE AND PERU IN MODERN TIMES. (4 cr) McCaa
Comparative analysis of political and economic experiments from the age of the liberators through the Marxist interludes of the 1970s.

3427. HISTORY OF CUBA AND PUERTO RICO. (4 cr, §Chic 3427) Valdés
Historical development from Spanish conquest to the present; conquest and colonization, slavery, Hispanic Caribbean society and culture, Operation Bootstrap, Cuban Revolution.

3428. HISTORY OF RELATIONS BETWEEN UNITED STATES AND MEXICO: 1821 TO THE PRESENT. (4 cr, §Chic 3428) Valdés
U.S.-Mexico relations in 19th and 20th centuries.

3441. THE SPANISH-MEXICAN BORDERLANDS AND THE CHICANO EXPERIENCE TO 1900. (4 cr, §Chic 3441) Valdés
The history of Chicanos to 1900.

3442. SURVEY OF CHICANO HISTORY: 1900 TO THE PRESENT. (4 cr, §Chic 3442) Valdés
Twentieth-century Chicano experience including migration and repatriation, contemporary politics, society, and culture.

5420. TOPICS IN LATIN AMERICAN HISTORY. (4 cr; prereq #) McCaa, C Phillips, Schwartz, Valdés
Historical themes common to the entire Latin American area. Topics change each quarter.

Proseminars

5511. SOCIAL AND INTELLECTUAL CHANGE IN LATE CHOU AND HAN CHINA. (4 cr) Taylor
Axial Age transcendence of primordial myths in the cultural crisis of late Chou and early Han: major schools of philosophy and statecraft; establishment of the literati as a social elite.

5512. RELIGION AND SOCIETY IN LATE IMPERIAL CHINA. (4 cr) Taylor
Chinese traditional society approached through the institutions of official and popular religion, Buddhism and Daoism.

5514. TOPICS IN MING AND CH'ING HISTORY, 1350-1800. (4 cr; prereq #) Farmer, Waltner
Major issues in early modern Chinese history, especially imperial institutions, neo-Confucian thought, and the Ming-Ch'ing transition.

5515. LOCAL INSTITUTIONS IN MODERN CHINA. (4 cr; prereq #) Farmer
The marketing system, village, and clan and family structure in rural China; local control devices, religious practices, and status of women.

5519. TOPICS IN CHINESE HISTORY. (4 cr; prereq #) Farmer
Topics in recent Chinese history.

5521. INTRODUCTORY PROSEMINAR ON THE MEIJI REVOLUTION IN JAPAN. (4 cr; prereq #; offered alt yrs) Marshall
Readings in English on the reforms from 1868 to 1912 and their economic, social, political, and cultural consequences.

5522. CURRENT ISSUES IN JAPANESE HISTORY. (4 cr; prereq #; offered alt yrs) Marshall
Readings in English on current interpretations and topics in Japanese history.

5561-5562-5563†. ANCIENT GREEK HISTORY. (4 cr per qtr; prereq #) Kelly

5571-5572-5573†. PROSEMINAR: ROMAN HISTORY. (4 cr per qtr; prereq #) J Evans

5610. MEDIEVAL EUROPEAN HISTORY AND ITS HISTORIANS. (4 cr) Bachrach, Hanawalt, W Phillips, Reyerson
Major historiographical debates in medieval European history; consideration of the types of sources available for addressing the historical problems and the various methodologies used.

5611, 5612, 5613. MEDIEVAL HISTORY. (4 cr per qtr; prereq 1 yr of medieval history or equiv, reading knowledge of French or German, #) Bachrach, Hanawalt, W Phillips, Reyerson

5616. PROSEMINAR: MEDIEVAL SPAIN. (4 cr; prereq #) W Phillips
Review of secondary literature of history of medieval Spain from Visigothic period to Renaissance. Emphasizes Middle Ages.

Major Requirements and Course Descriptions

5620. SELECTED TOPICS IN MEDIEVAL HISTORY. (4 cr; prereq 1 yr medieval history or equiv, reading knowledge of appropriate foreign language(s), #) W Phillips

Topics in European and/or Mediterranean history from the fall of the Roman Empire through the end of the Middle Ages.

5621. THE ITALIAN RENAISSANCE. (4 cr; prereq #) Pomata, Tracy

Humanism; political development of city-states.

5625. THE GERMAN REFORMATION. (4 cr; prereq #) Tracy

Luther; urban religious movements; the Catholic Reformation.

5626. RENAISSANCE FRANCE. (4 cr; prereq #)

Tracy

French monarchy, Reformation and Counter-Reformation, religious wars, intellectual history.

5630. COMPARATIVE EARLY MODERN HISTORY. (4 cr; prereq #) Staff

Critical examination of historical literature dealing with selected topics in early modern history, circa 1450-1750.

5631. EARLY MODERN HISTORY. (4 cr; prereq #) Staff

Two-quarter proseminar in early modern history: Review of pertinent secondary literature dealing with various processes of global integration circa 1450-1700 and with the comparative study of different regions. Reading knowledge of at least one foreign language required.

5640. TOPICS IN EARLY MODERN EUROPE. (4 cr; prereq #) Staff

5651-5652-5653†. ENGLISH HISTORY: TUDOR AND STUART PERIODS. (4 cr per qtr; prereq #)

Lehmborg

Critical study of principal writings about English history. 5651: 1485-1558. 5652: 1558-1625. 5653: 1625-1689.

5671-5672-5673†. MODERN ENGLAND: 1783 TO THE PRESENT. (4 cr per qtr; prereq #) Altholz

5710. INTRODUCTORY PROSEMINAR IN 18TH- AND 19TH-CENTURY EUROPE. (4 cr; prereq #)

Staff

Topics in the historical literature of modern Europe, 18th and 19th centuries. Topics vary within one of the following areas: politics and diplomacy, intellectual and cultural history, economy, society.

5715. PROSEMINAR: READINGS ON EUROPEAN WOMEN'S HISTORY, 1450-1750. (4 cr; prereq #)

Pomata

Survey of recent literature on the social history of European women and an introduction to bibliographical and archival resources.

5720. INTRODUCTORY PROSEMINAR IN CONTEMPORARY EUROPE. (4 cr; prereq #) Staff

Selected topics dealing with problems of interpretation and analysis in contemporary European history from the late 19th century to the Cold War.

5721-5722†. EUROPE IN THE 20TH CENTURY.

(4 cr per qtr; prereq #) Munholland

5721: Background and impact of World War I. 5722: Interwar years and World War II.

5730. PROSEMINAR IN MIDDLE EAST HISTORY: 16TH TO 19TH CENTURY. (4 cr) Farah

Topics, which vary widely, on Mamluk, Safavid-Qajar, and Ottoman era concerning relations with each other and outside world, to include political, diplomatic, and ideological orientations and conflicts; cultural and social trends; commerce; transformations due to Western impact, to secularization, and to modernization and colonial encroachments.

5735. READING ON EUROPEAN WOMEN'S HISTORY: 1750 TO THE PRESENT. (4 cr; prereq #)

Maynes

Selected themes in modern European women's history.

5741-5742†. GERMANY AND CENTRAL EUROPE IN 18TH CENTURY. (4 cr per qtr; prereq #) Wright

Enlightenment, reason, reform, war.

5744-5745. TOPICS IN MODERN GERMAN HISTORY. (4 cr per qtr; prereq #) Kieft, Maynes

Selected readings and discussions on topics such as the reform era, social crisis of Vormärz, 1848 revolution, unification, imperial economic development, World War I, the growth of German socialism, intellectual history of Weimar, and Nazi state.

5756-5757†. MODERN GREEK STUDIES. (4 cr per qtr) Stavrou

Evolution of modern Greece from the middle of the 18th century to the present. 5756: Political, cultural, and socioeconomic factors that contributed to Greek nationalism and the establishment of independent Greece. 5757: Political and cultural developments in the 20th century.

5761-5762-5763†. RUSSIAN HISTORY. (4 cr per qtr; prereq reading knowledge of Russian, or German or French, #) Stavrou

5772, 5773. SCANDINAVIAN HISTORY. (4 cr per qtr; prereq reading knowledge of one Scandinavian language or Finnish, #) Metcalf

Topics and chronological emphasis vary yearly.

5777, 5778. AUSTRIAN AND HABSBERG HISTORY. (4 cr per qtr; prereq #) Good

5777: Habsburg Central Europe to 1918. 5778: Modern Austria in context of Central and Eastern Europe after 1918.

5784-5785. DIPLOMATIC HISTORY OF 19TH- AND 20TH-CENTURY EUROPE. (4 cr per qtr; prereq #; offered alt yrs) Kieft

5784: From 1815 to 1914. Historical literature on the Congress of Vienna, unification of Italy and Germany, Bismarck alliance system, other events. 5785: 1914 to present. World War I, Paris Peace Conference, origins of World War II, causes of the Cold War.

5791-5792†. SOCIAL HISTORY OF MODERN EUROPE SINCE 1750. (4 cr per qtr; prereq #) Rudolph**5793, 5794. READINGS IN EUROPEAN ECONOMIC HISTORY: 1750-THE PRESENT.** (4 cr; prereq #) Good

Selected topics in economic development of modern Europe. 5793: Europe's rise in world economy, England's industrial revolution; uneven development within Europe. 5794: late 19th-century capitalism and imperialism, interwar economic instability, post-World War II economic miracle in Western Europe, continuity and change in Eastern Europe.

5797. METHODS OF HISTORICAL DEMOGRAPHY. (4 cr; prereq #) McCaa, Ruggles

Analysis of past population and its relation to other historical developments. Birth, marriage and the family, household structure, diseases, death, the impact of industrialization and urbanization.

5801-5802†. 17TH- AND 18TH-CENTURY AMERICAN HISTORY. (4 cr per qtr; prereq #; offered alt yrs) Menard**5816. THE BEGINNINGS OF AMERICAN POLITICS.** (4 cr; prereq #) Howe

Development of American political institutions, behavior, and culture from the colonial beginnings through the American Revolution and the ratification of the federal constitution. Emphasis on the connections between politics, society, and American culture.

5817. 19TH-CENTURY U.S. POLITICAL HISTORY. (4 cr; prereq #)

Readings about the history and historiography of 19th-century American politics; social analysis of politics, 1789 to 1850.

5821-5822†. AMERICAN HISTORY IN 20TH CENTURY. (4 cr per qtr; prereq #)**5831-5832†. AMERICAN POLITICAL AND CONSTITUTIONAL HISTORY.** (4 cr per qtr; prereq #) Murphy

Dimensions of constitutional politics in the American experience. 5831: Late 18th and 19th century. 5832: The 20th century.

5841, 5842. AMERICAN ECONOMIC HISTORY. (4 cr per qtr; prereq #) Green**5844, 5845. AMERICAN LABOR HISTORY.** (4 cr per qtr; prereq #) Berman

Readings in the classics of American labor history literature. Research methods and materials in labor history.

5854, 5855. THEMES IN AMERICAN SOCIAL HISTORY. (4 cr)

Historical literature on U.S. social history, including historical demography, family history, and urban history. Historiographical or research paper required.

5857-5858†. PROSEMINAR: SOCIAL HISTORY OF AMERICAN WOMEN. (4 cr per qtr; prereq #; offered alt yrs) S Evans

Historical literature, conceptual frameworks, and methodological problems in the history of American women from 1600 to the present.

5861-5862†. HISTORY OF AMERICAN IMMIGRATION. (4 cr per qtr; prereq #; offered alt yrs) Vecoli

Readings in historiography of immigration and ethnic groups.

5871-5872†. INTELLECTUAL HISTORY OF UNITED STATES IN 19TH, 20TH CENTURIES. (4 cr per qtr; prereq #) Noble

Writings of current scholars of American culture that express paradigmatic conflicts in the study of ideas and values.

5881, 5882. AMERICAN FOREIGN RELATIONS. (4 cr per qtr; prereq #) Brauer

Intensive readings in the historiography of American foreign relations, with emphasis on American imperialism, domestic sources of foreign policy, and international political, economic, and cultural relations. 5881: To 1900. 5882: Since 1900.

5890. AMERICAN INDIAN SOCIAL HISTORY. (4 cr; prereq #) O'Brien

Social history of American Indian groups across time and space; historical demography, gender roles, interracial relationships, urbanization, and internal differences within Indian communities.

5901, 5902. LATIN AMERICAN HISTORY. (4 cr; prereq reading knowledge of Spanish, #) McCaa, Schwartz, Valdés

Introduces beginning graduate and advanced undergraduate students to major historical writings on various Latin American themes.

5920. TOPICS IN COMPARATIVE WOMEN'S HISTORY. (4 cr; prereq #) Pomata, Waltner, White

Cross-cultural and thematic explorations in the history of women, including women, markets, and agriculture; women in colonialism; women and class formation; women and religion; prostitution; the medical construction of gender; women's narratives as historical sources.

5930. TOPICS IN COMPARATIVE THIRD WORLD HISTORY. (4 cr; prereq #) Isaacman, Kopf, Schwartz, White

Recurring themes in Third World history.

Major Requirements and Course Descriptions

5931. HISTORY OF AFRICA: SOCIAL GROUPING, CONFLICTS. (4 cr; prereq #) Isaacman, White
The rise of social differentiations in precolonial and contemporary African societies; how this process affects formation and development.

5932. AFRICAN HISTORIOGRAPHY. (4 cr; prereq #) Isaacman, White
Critique of written sources of African history and the history of the peoples of African descent in the Americas from antiquity to the present.

5939. METHODOLOGY FOR THE STUDY OF AFRICAN HISTORY. (4 cr; prereq #) Isaacman, White
The process of historical reconstruction in nonliterate societies; collection and interpretation of oral traditions.

5942. THE MOTION PICTURE INDUSTRY AND THE RISE OF COLD WAR CULTURE: 1940-1960. (4 cr; prereq #; meets with AmSt 8229) Brooks, May
Develop new understanding of post World War II culture. Convergence of two trends normally studied in isolation.

5957. LAW, SOCIETY, AND AMERICAN CRIMINAL JUSTICE. (4 cr; prereq #) Samaha
Readings in the societal, legal, and ideological development of modern American criminal justice; the influences of ideology, politics, culture, and social science on law and criminal justice.

5960. RESEARCH IN QUANTITATIVE HISTORY. (4 cr; prereq 5011 or 5797, #) Ruggles
Workshop to expand on projects completed in 5011, 5797, or other history courses.

5961, 5962. EXPANSION OF EUROPE. (4 cr per qtr; prereq #) C Phillips, W Phillips, Schwartz

5970. DIRECTED STUDIES. (1-15 cr per qtr; prereq #)
Qualified senior and graduate students may register for work on tutorial basis. Guided individual reading or study.

5990. DIRECTED RESEARCH. (1-15 cr per qtr; prereq #)
Qualified senior and graduate students may register for work on tutorial basis.

History of Medicine (HMed)

Medical School

Staff—Chair and Director of Graduate Studies, Leonard G. Wilson, 510 Diehl Hall; **Director of Undergraduate Studies,** John M. Eyler, 511 Diehl Hall

Professor: Wilson

Associate Professor: Eyler

Courses offered by the department explore the development of medical knowledge, institutions, and practices; the history of diseases; and the place of medicine in Western intellectual and social history.

Minor Sequence

Minor Requirements—12 cr in introductory survey courses selected from 3001, 3002, 3003, 5400, 5401, 5402, or Hist 3031, 3032, 3033

8 cr selected from 3xxx or 5xxx classes or seminars

The minor program must be approved by the director of undergraduate studies. History of medicine courses that are not cross-listed with history courses count as CLA courses for the CLA graduation requirement if they are taken for the history of medicine minor and the minor is completed. They do not count as CLA courses if the history of medicine minor is not completed.

3001, 3002, 3003. MEDICINE AND DISEASE IN HISTORY. (4 cr per qtr, §Hist 3031, §Hist 3032, §Hist 3033) Eyler

Intellectual and social history of medicine in Europe and America. 3001: Classical antiquity through mid-17th century. 3002: Mid-17th through mid-19th centuries. 3003: Modern medicine in America.

5002. PUBLIC HEALTH ISSUES IN HISTORICAL PERSPECTIVE. (4 cr, §PubH 5002) Eyler

Evolution of major recurring problems and issues in public health including the environment and health, food customs and nutrition, control of alcohol and drugs, venereal diseases and public policy, human resources regulation, and relationship of science to promotion of health.

5035. THE GERM THEORY AND THE MEDICAL PROFESSION. (4 cr, §Hist 5035) Eyler

Formulation of the germ theory of disease and its consequences for medical procedures (therapeutics, surgery, management of hospitals), for public health programs, and for the structure and prestige of the medical profession.

5045. MEDICAL PROFESSION IN AMERICA.

(4 cr, §Hist 5045) Eyler
American medical profession in 19th and 20th centuries; role of institutions, influence of social and moral values, and consequences of specialization and scientific innovation.

5120-5130. HISTORICAL TOPICS: MEDICINE AND THE MODERN STATE. (4 cr per qtr [16 cr max], §Hist 5940-5950) Eyler

Topics vary yearly. Emphasis on mid-18th century to present.

5400, 5401, 5402. INTRODUCTION TO THE HISTORY OF MEDICINE. (4 cr per qtr) Wilson

5400: Early history of medicine to 1650. 5401: Medicine during the scientific revolution, 1650-1830. 5402: Medicine since 1830.

5410-5411-5412†. SEMINAR: EMERGENCE OF MODERN MEDICINE, 1750-1900. (3 cr per qtr; pre-req #)

Reading of original medical observations and ideas and of historical writings pertaining to them. Each student submits research paper at end of third quarter.

History of Science and Technology (HSci)

Institute of Technology

Staff—Director, Alan E. Shapiro, 354C Physics; **Director of Undergraduate Studies,** Arthur L. Norberg, 103 Walter Library; **Director of Graduate Studies,** John Beatty, 8 Zoology

Professors: Kohlstedt, Layton, Shapiro, Stuewer

Associate Professors: Beatty, Norberg

The history of science and technology concerns the origins and development of science and technology and their relations to the social, cultural, and philosophical currents of their time. Courses may be taken to support existing majors as well as to broaden knowledge of the nature and development of science and technology. The introductory courses of 1711-1712-1713/3711-3712-3713 and 1811-1812-1813/3811-3812-3813 satisfy distribution requirements C-2, the individual and society—the historical perspective.

Minor Sequence

Minor Requirements—16 cr of 3xxx-5xxx courses, at least 4 cr at the 5xxx level

The minor program must be approved by the director of undergraduate studies.

1711, 1712, 1713. TECHNOLOGY AND WESTERN CIVILIZATION. (4 cr per qtr, §3711, §3712, §3713) Layton

History and sociocultural relations of Western technology. 1711: The relations of technology to culture from the Bronze Age to the Middle Ages. 1712: Technology and science in the Renaissance; technology and the scientific revolution; the Industrial Revolution. 1713: Diffusion of the Industrial Revolution; technological development and its impact on industry, government, and society of the 19th and 20th centuries, especially in the United States.

1811, 1812, 1813. INTRODUCTION TO HISTORY OF SCIENCE. (4 cr per qtr, §3811, §3812, §3813) Shapiro

1811: Babylonian and Egyptian science; Greek natural philosophy, mathematics, astronomy, and biology; the Aristotelian world; decline and transmission of Greek science. 1812: Medieval background; the scientific revolution; the "experimental philosophy"; dissecting and describing nature; anatomy, circulation, and respiration; Copernican revolution; physical world of Kepler, Galileo, Descartes, and Newton; science and the popular imagination. 1813: 19th and 20th centuries; Newtonian triumph, romantic reaction, and modern revolution; the aether, electrical and optical, to Einstein; history of the earth; evolution before and after Darwin; nuclear physics and nuclear weapons.

3201, 3202. HISTORY OF BIOLOGY. (4 cr per qtr, §5201, §5202) Beatty

Scientific, philosophical, and social factors in the development of biology; changing styles of biological reasoning, and changing relationships between the biological and physical sciences. 3201: Biology from antiquity through the early modern period. 3202: Biology in the 19th and 20th centuries.

3331. TECHNOLOGY AND AMERICAN CULTURE. (4 cr, §5331) Norberg

Historical survey of the development of American technology in its cultural and intellectual context from the colonial period to the present. Includes transfer of technology to America; establishment of an infrastructure promoting economic growth; relationship among government, corporate, and academic influences; and the social response of technological developments.

3332. SCIENCE AND AMERICAN CULTURE. (4 cr, §5332) Kohlstedt

Historical survey of the development of American science, including the transfer of science to America; development of indigenous traditions for the pursuit of science; establishment of an infrastructure for education and research; response of the public to scientific development; and the relationship among government, corporate, and academic scientists.

3711, 3712, 3713. TECHNOLOGY AND WESTERN CIVILIZATION. (4 cr per qtr, §1711, §1712, §1713)

For description, see 1711, 1712, 1713.

Major Requirements and Course Descriptions

3811, 3812, 3813. INTRODUCTION TO HISTORY OF SCIENCE. (4 cr per qtr, §1811, §1812, §1813)
For description, see 1811, 1812, 1813.

3825. THE NUCLEAR AGE. (4 cr, §5825) Stuewer
Origin, development, and social impact of nuclear physics from beginning of 20th century through post-World War II era. Experimental discoveries, theoretical models of the nucleus; refugees from Nazism and Fascism; construction and use of atomic bomb; Oppenheimer and McCarthyism.

5111. PHYSICAL SCIENCES IN ANTIQUITY. (4 cr) Shapiro

Mathematics and astronomy in Babylonia; Greek mathematics, Euclid and Archimedes; Aristotle's physics and cosmology; the emergence of mathematical and experimental natural science in Greece; Ptolemaic astronomy.

5201, 5202. HISTORY OF BIOLOGY. (4 cr per qtr, §3201, §3202)
For description, see 3201, 3202.

5242. THE DARWINIAN REVOLUTION. (4 cr; pre-req Biol 1009 or 1101 or #) Beatty
Pre-Darwinian conceptions of nature; development and reception of Darwin's theory of evolution by natural selection; also the broader context of the Darwinian Revolution, including religious thought, political theory, and views about proper scientific methodology.

5321. HISTORY OF COMPUTING. (4 cr, §3321) Norberg
Developments in last century: factors affecting evolution of hardware and software, growth of the industry and its relation to other business areas, and changing relationships resulting from new data gathering and analysis techniques.

5331. TECHNOLOGY AND AMERICAN CULTURE. (4 cr, §3331)
For description, see 3331.

5332. SCIENCE AND AMERICAN CULTURE. (4 cr, §3332)
For description, see 3332.

5511. HISTORY OF SCIENTIFIC METHODOLOGY. (4 cr) Beatty
Changing views of the aims and methods of science as seen through the eyes of philosopher-scientists of the past; how notions such as "explanation," "evidence," "probability," etc. have changed.

5681. ENGINEERING IN HISTORY. (4 cr) Layton
Civil and mechanical engineering since the Industrial Revolution; the complementary roles played by structures and machines in the history of technology. The interaction of structure with aesthetics and of machines with science.

5825. THE NUCLEAR AGE. (4 cr, §3825)
For description, see 3825.

5924. HISTORY OF 19TH-CENTURY PHYSICS. (4 cr, §Phys 5924; prereq general physics or #)
Stuewer

Experimental and theoretical discoveries in 19th-century physics (wave theory of light, atomic theory, heat, thermodynamics and statistical mechanics, electromagnetism and field theory) within context of educational, institutional, and political developments in Europe and the United States.

5925. HISTORY OF 20TH-CENTURY PHYSICS. (4 cr, §Phys 5925; prereq general physics or #)
Stuewer

Experimental and theoretical discoveries in 20th-century physics (birth of modern physics, special theory of relativity, old and new quantum theories) within context of educational, institutional, and political developments in Europe and the United States.

5935. HISTORY OF NUCLEAR PHYSICS. (4 cr; prereq general physics or #) Stuewer
Experimental and theoretical developments in nuclear physics to World War II in their institutional, social, and political contexts. Life and work of Becquerel, Curie, Rutherford, Chadwick, Gamow, Lawrence, Fermi, Bohr, Hahn, Meitner, others.

5970. DIRECTED STUDIES. (1-15 cr per qtr; prereq #)
Guided individual reading or study.

5990. DIRECTED RESEARCH. (1-15 cr per qtr; prereq #)

College of Human Ecology

Courses appearing in the *CLA Bulletin* are approved for CLA credit. However, CLA students may take up to 28 credits of coursework offered by other colleges. The credits may be applied toward CLA degrees, and in some cases may be used to fulfill general education requirements. Consult your college office adviser for a list of courses from other colleges approved for general education requirements.

Descriptions of courses offered by the College of Human Ecology can be found in the bulletin of that college.

Honors Program

Staff—Director, Gordon Hirsch, 115 Johnston Hall

The CLA Honors Program is described fully in the first section of this bulletin. Honors course offerings consist of department honors courses and college honors courses.

Departmental Honors Courses—There are honors sections of many regular classes. Most departments also offer special seminars, tutorials, internships, or independent research projects for honors students. Departmental honors courses are designated by an H following the course number. See departmental listings in this bulletin for specific honors offerings. A complete list of honors courses for the current quarter is available in 115 Johnston Hall.

College Honors Courses—Distinguished members of the faculty in CLA and other colleges on the Twin Cities campus are selected to teach Honors Seminars (for juniors and seniors) and Colloquia (for freshmen and sophomores). Course topics are drawn from the research specialization of the instructor and include subject matter not treated in the regular curriculum of the college. The courses are often interdisciplinary and experimental in nature. Descriptions of honors seminars and colloquia for the current quarter are available in 115 Johnston Hall.

Honors Colloquium (HCol)

1001. HONORS COLLOQUIUM: INTRODUCTION TO THE ARTS AND SCIENCES. (2 cr; prereq fr, honors division regis)
Discussions led by faculty representing a variety of disciplines in the College. Introduction to the problems these disciplines address and the methods they use.

1010-1090. HONORS COLLOQUIUM. (2-4 cr per qtr; prereq fr or soph, honors division regis)
Topics change each quarter.

1110-1190. HONORS COLLOQUIUM. (2-4 cr per qtr; prereq fr or soph, honors division regis)
See description for 1010-1090.

1970. DIRECTED STUDIES. (1-4 cr per qtr; prereq fr or soph, honors division regis, #, Δ)
For additional research related to a colloquium topic.

Honors Seminar (HSem)

3020-3090. HONORS SEMINAR. (4 cr per qtr; prereq jr or sr, honors division regis)
Topics change each quarter.

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq jr or sr, honors division regis, #, Δ, □)
For additional research related to a seminar topic.

Humanities (Hum)

Humanities is the interdisciplinary and cross-cultural study of how varying modes of discourse are both rooted in and active within history, society, and culture. The objective is an improved understanding of the complex interrelation of ideas, values, social patterns, and material realities, with attention to the subtleties inherent within different styles of thought, genres of expression, cultural contexts, and historic moments.

The program is being combined with the Comparative Literature program to form the Department of Cultural Studies and Comparative Literature. The new department will offer an undergraduate major. For information, contact the CLA Student Information Office, 214 Johnston Hall (612/625-2020). For information about the department's graduate programs, contact the Graduate School's Prospective Students Services office, 307 Johnston Hall, University of Minnesota, 101 Pleasant Street S.E., Minneapolis, MN 55455.

Introductory Courses

1301. DISCOURSE AND SOCIETY. (4 cr)
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.

1302. TEXT AND CONTEXT. (4 cr)
Examination of varied historically grounded case studies, in order to explicate ways in which social and political tensions of particular moments and local milieus find representation in specific items of discourse. Relation of cultural discourses to the sociohistorical conditions of their emergence.

1303. KNOWLEDGE, PERSUASION, AND POWER. (4 cr)

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.

Major Requirements and Course Descriptions

Survey Courses

1001. HUMANITIES IN THE MODERN WORLD I. (4 cr, §Rhet 1301)

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.

1002. HUMANITIES IN THE MODERN WORLD II. (4 cr, §Rhet 1302)

Romanticism, liberalism, socialism; Industrial Revolution, materialism, cult of the individual and some counterstatements; realism, naturalism. Integrative study of works by creative figures such as Wordsworth, Byron, Adam Smith, Bentham, Marx, Mill, Stendhal, Flaubert, Ibsen, Dostoevsky, Delacroix, Courbet, Daumier, Beethoven, Berlioz, Liszt.

1003. HUMANITIES IN THE MODERN WORLD III. (4 cr, §Rhet 1303)

Impact of science, especially evolution theory, on religious and humanistic thought; roots of existentialism; disorientation in modern culture; impressionism. Integrative study of works by creative figures such as Kierkegaard, Darwin, Nietzsche, Chekhov, Joyce, Mann, Manet, Monet, Renoir, Degas, Wagner, Debussy, Mahler.

1004. HUMANITIES IN THE MODERN WORLD IV. (4 cr, §Rhet 3381)

Europe, 1914-1940. Ideas and forms of society and culture: Leninist, fascist-Nazi, Freudian, neo-orthodox. Expressionism, dada, surrealism. Integrative study of works by creative figures such as Lenin, Freud, Kafka, Eliot, Duchamp, Klee, Kollwitz, Dali, Picasso, Stravinsky, Schönberg, Bartók, Wright, Gropius.

1005. HUMANITIES IN THE MODERN WORLD V. (4 cr)

The Western world, 1940-1970. Existentialism, "the absurd"; searches for identity, commitment; religious trends; influence of oriental spiritual traditions. Integrative study of selected works by such creative figures as Camus, Sartre, Ionesco, Bultmann, Watts, Pollock, Warhol, Beauvoir, Cage, Corbusier, Fellini.

1111. EUROPEAN HERITAGE: GREECE. (4 cr, §Rhet 3321)

Greek civilization; literary and artistic works that have influenced modern Western culture. Epic and lyric poetry, drama, architecture, sculpture, philosophy, religion; Homer, Hesiod, Aeschylus, Sophocles, Euripides, Aristophanes, Plato, Aristotle.

1113. EUROPEAN HERITAGE: ROME. (4 cr, §Rhet 3322)

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.

1115. EUROPEAN HERITAGE: MIDDLE AGES. (4 cr, §Rhet 3322)

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.

1117. EUROPEAN HERITAGE: RENAISSANCE, REFORMATION. (4 cr, §Rhet 3323)

Civilization in 15th- and 16th-century Italy; religious and cultural reaction in northern Europe. Scientific naturalism, individualism, humanism. Writings: Petrarch, Machiavelli, Castiglione, Erasmus, Luther, Calvin, Montaigne, Marlowe. Arts: Botticelli, Michelangelo, Leonardo, Raphael. Music: Dufay, Josquin, Lasso.

1119. EUROPEAN HERITAGE: AGE OF THE BAROQUE. (4 cr) Thomas

Counter-Reformation, religious wars; mannerism, baroque Rome; Spanish golden age; new science, philosophy; Netherlandish culture; court of Louis XIV; German architecture, music. Authors: Calderón, Grimmelshausen, Descartes, Molière. Artists: Bernini, Borromini, El Greco, Rubens, Vermeer, Rembrandt. Composers: Palestrina, Monteverdi, Handel, Bach.

Intermediate Courses

Discursive Practices

Examination of specific discursive modes and the critical skills necessary for explicating works within them. Focus on their characteristic systems of production, distribution, and consumption, and the metadiscourses that have grown up around them.

3172. MUSIC AS DISCOURSE. (4 cr) Thomas
Close examination of widely varying musical forms and styles, "classical" and "popular," in relation to discourses about music and in relation to larger patterns of culture, ideology, and power.

3174. POETRY AS CULTURAL CRITIQUE. (4 cr) Damon
Examines the status of poetry in several cultures of the Americas, bringing together techniques of close reading and broad cultural inquiry.

3176. CINEMATIC DISCOURSE AND CULTURAL POLITICS. (4 cr; prereq 1301 or ArTH 1921) Mowitt
Examination of the way film texts and the social institutions of cinema both contribute to and resist the reproduction of social relations in modern Western countries. Particular attention to class, race, and gender as sites of sociocultural conflict.

3196. RELIGIOUS DISCOURSES. (4 cr, §RelS 3196) Lincoln
Critical analysis of such phenomena as myth, ritual, and cosmology; the grounding of ethical and legal systems in transcendent claims; priestly and prophetic authority; religion as ideology and practice.

3198. SOCIAL AND AESTHETIC PRODUCTION OF SPACE. (4 cr) Archer
Introduction to the production, distribution, and consumption of architecture and built space in the context of the larger societal framework. Attention to the perception, interpretation, and critique of built form.

Culture and Conflict: Case Studies

Each of these courses focuses upon a particular locus in time and space, and explores the multiple discourses that circulated, complemented, and conflicted with one another, while grounding all of them in the social structures and historic events of which they were a part.

3252. CULTURE AND SOCIETY: ENGLAND, 1640-1688. (4 cr) Josephides
Examination of the background to English civil war and its lasting effects on culture and society. Emphasis on transformed concepts of the person, the person in society, and gender. Hobbes, Locke, Milton, Marvell, Bunyan, Aphra Behn, Richardson.

3254. ARCHITECTURE AND SOCIETY: 1760-1870. (4 cr) Archer
Role of individualism, capitalism, technology, social change, property relations, land use in production of architecture and urban space in Europe and especially North America, 1760-1870. Close attention to formal and aesthetic means of articulating social tensions and relations.

3256. AESTHETICS, ARTS, AND SOCIETY: FRANCE, 1848-1900. (4 cr; prereq jr or sr or #) Kliger
Major movements in painting, literature, and poetry in France during second half of 19th century. Aesthetic concepts of artists and their critics, in context of historical events and social and political changes.

3274. ARTS, LETTERS, AND DAILY LIFE IN THE SPANISH CIVIL WAR. (4 cr) Lincoln
Social, political, and military in nature, the Civil War was also a struggle of competing worldviews, waged in art, letters, and daily life. Works of Hemingway, Orwell, Picasso, Neruda, Emma, Goldman, et al.

Influential Configurations of Knowledge

Bodies of knowledge that hold privileged status as metadiscourse through which other discourses can be interpreted. Attention to the internal logic, rhetorical figures, and explicative power of such discourses, as well as the processes through which they both gain and lose their influence.

3321. THEORIES OF CULTURE. (4 cr; prereq jr or sr or #)
Sociological, anthropological, philosophical models of culture. Critical analyses of interrelations of art, society, and ideology. Authors include Marx, Durkheim, Freud, Gramsci, Benjamin, Marcuse, Geertz, Derrida, Foucault.

3366. LANDSCAPE AND IDEOLOGY: 1600-1875. (4 cr, §Hum 3663) Archer
Cultural construction of nature as concept and as environment. From Puritan "garden in the wilderness" to 18th-century "natural" landscape garden and 19th-century transcendentalism. Attention to the role of agriculture, religion, philosophy, aesthetics, property relations, travel, and exploration.

Social Constructions of the Subject

Analyses of gender, sexuality, race, and class as discursive constructions productive of human subjectivity and cultural difference. Attention to the institutions and ideologies through which such difference is transmitted, maintained, or subverted.

3456. SEXUALITIES—FROM PERVERSITY TO DIVERSITY. (4 cr; prereq 1301 or 1302 or 1303 or any WoSt course) Messer-Davidow
Examination of contemporary constructions of Western sexuality (heterosexuality, homosexuality, lesbianism, romance, pornography, erotic domination, and lynching), institutions that constitute or compel them, and moral discourses. Materials include fiction, personal narratives, manuals, ads, journalism, and scholarship and theory from several disciplines.

3458. THE BODY AND THE POLITICS OF REPRESENTATION. (4 cr) Leppert
Western representation of the human body, Renaissance to 1900, considering both Western and non-Western peoples. Body's appearance as site/sight for production of sociocultural difference (race, ethnicity, class, gender). Visual arts, medical treatises, courtesy books, travel literature, ethnographies, erotica.

Major Requirements and Course Descriptions

3472. GAY MEN AND HOMOPHOBIA IN THE MODERN WEST. (4 cr) Thomas

Historical experience and the representation of gay men in the West since 1600, studied in the context of social constructions of same-sex desire, homophobia, gender, sexuality and the body, in discourses of religion, law, literature, and the arts.

Topics: Intermediate

3626. HUMANISMS, SCIENTIFIC AND SECULAR. (4 cr; prereq 1003 or 1004) Tapp

Recent and contemporary attempts to base social philosophy on scientific theories and premises, excluding traditional religious and metaphysical commitments. Writers such as G.P. Conger, Corliss Lamont, Julian Huxley, Paul Kurtz, Ervin Laszlo, Oliver Reiser.

3635. HINDUISM: FROM GUPTAS TO 13TH CENTURY. (4 cr, §SoAs 3635; prereq jr or sr or #) Kliger

Development of classical Hinduism in its multiple cultural and social manifestations, from the 4th to 13th century C.E. Art, religion, mythology, literature, philosophy, caste system.

3675. COUNTERFAITHS IN CONTEMPORARY NOVELS. (4 cr) Tapp

Camus, Clarke, Heinlein, Hesse, Huxley, Kazantzakis, Sartre, Skinner, Vonnegut as embodiments of alternative faith perspectives and sensibilities that have emerged in alienation from the Western past.

3677. SELF-REALIZATION IN 20TH-CENTURY LITERATURE. (4 cr; prereq jr or sr or #) Kliger

Quest for meaning and process of individuation. Works by Conrad, Kate Chopin, Joyce, Sartre, Hesse.

3701. COMEDY: TEXT AND THEORY. (4 cr) Thomas

Interdisciplinary study of comedy and comic theory through time and across world cultures in philosophy, psychology, literature, drama, film, folk tale, play, and social convention.

3910. TOPICS IN THE HUMANITIES. (4 cr per qtr; prereq jr or sr or #)

Topics specified in *Class Schedule*.

3970. DIRECTED STUDIES. (Cr ar; prereq #)

Guided individual reading or study.

Advanced Courses

Socio-discursive Processes

Analysis of the ways in which material and nonmaterial dimensions of human experience condition one another.

5178. THE POLITICAL DISCOURSE OF SOCIAL CHANGE. (4 cr; prereq jr or sr or grad or #) Josephides

Tension between "tradition" and innovation (of ideas, techniques, material development) in contexts of rapid social change, especially when local cultures come into contact with politically more forceful ones. "Traditions" recast as an already politicized discourse.

Historic Trajectories

Development of significant traditions of thought and expression and their dialectic relation to events and processes that unfold over history of the long duration. Particular attention to shifts in technology, the organization of power, modes of production, and levels of social integration.

5232. EARLY BUDDHISM, CASTE AND CHAUVINISM. (4 cr, §ReIS 5232; prereq jr or sr or grad or #) Tapp

Early Buddhists rejected caste traditions of Indian religions, opening the door to the conversion of non-Hindus and the missionary expansion of Buddhism. The polemics and intellectual-social implications of these processes are explored.

5304. THEORIES OF IDEOLOGY: PHILOSOPHICAL VIEWS. (4 cr; prereq jr or sr or grad or #)

Kliger

Explores leading contributions to an understanding of nature and function of ideology. Representative theories may include those of Marx, Nietzsche, Freud, Mannheim, Althusser, Foucault, Habermas, and feminist theories.

5318. DARWINISM AND THE THEOLOGIANS.

(4 cr, §ReIS 5318; prereq jr or sr or grad or #) Tapp
Evolutionary reconceptions of biological and cultural processes that dominated the 19th century caused problems for theologians regarding human nature, cosmic purpose, and historical processes; discourses of accommodation, rejection, and compromise.

5392. THE IDEOLOGY OF THE MASTER NARRATIVE. (4 cr; prereq jr or sr or grad or #) Josephides

Examines totalizing frameworks of explanation as hegemonic discourses whose claim to objectivity and universality rests on an exclusion of other possible discourses and representations. With special attention to ethnography, it considers the usefulness and viability of a polyphonic, postmodernist approach.

5398. PHENOMENOLOGY AND ETHNOGRAPHY.

(4 cr, §Anth 5394; prereq jr or sr or grad or #) Josephides
Phenomenological/existentialist thought conceived as "the end of ideology"; its politicization during World War II; its use in reflexive anthropology conscious of its own colonial foundations; its use in attempts to understand The Other and in concepts of the person.

5711. INTERPRETATION OF MYTH. (4 cr, §RelS 5111, §CSDS 5711; prereq jr or sr or grad)

Structure and function of myths. Myth as social charter, ideological system, and literary form. Readings in classic theories of myth; primary sources from India, Iran, Mesopotamia, Greece, Africa, North and South America.

Topics: Advanced

5833. INDIA'S GODS AND GODDESSES. (4 cr, §SoAS 5833; prereq 1211 or RelS 1031 or SoAs 1504 or equiv, jr or sr or #) Tapp

Indian history examined by following the development of the deities Krishna, Shiva, and Kali. Attention to interactions of region, gender, class in manifestations of art, drama, literature, and ideology.

5835. RICHARD WAGNER'S DER RING DES NIBELUNGEN: MUSIC, MYTH, AND POLITICS. (4 cr; prereq jr or sr or #) Thomas

Literary and musical analysis and historical context of the four works of Wagner's "Ring": *Das Rheingold*, *Die Walküre*, *Siegfried*, *Götterdämmerung*. Critical assessment of Wagner's achievement and influence.

5837. NIETZSCHE AS CULTURAL CRITIC. (4 cr; prereq jr or sr or grad or #) Klinger

Nietzsche's contributions to philosophy, psychology, and criticism of religion, culture, and society.

5910. TOPICS IN THE HUMANITIES. (4 cr; prereq jr or sr or grad)

Topics specified in *Class Schedule*.

5970. DIRECTED STUDIES. (Cr ar; prereq jr or sr or grad, #)

For description, see 3970.

5990. SENIOR WORKSHOP. (4 cr; prereq sr humanities major or jr humanities major with Δ)

Faculty and student analysis of cultural artifacts.

Comparative Studies in Discourse and Society (CSDS)

5301. SOCIETY, IDEOLOGY, AND THE PRODUCTION OF ART. (4 cr; prereq jr or sr or grad)

Recent critical theories on the relation of the arts to social and ideological forces; selected artifacts from Western culture (renaissance to 20th century; high, popular, and mass cultures). Music, visual art, literature.

5711. INTERPRETATION OF MYTH. (4 cr, §Hum 5711; prereq jr or sr or grad)

Structure and function of myths. Myth as social charter, ideological system, and literary form. Readings in classic theories of myth; primary sources from India, Iran, Mesopotamia, Greece, Africa, North and South America.

5712. INTERPRETATION OF RITUAL. (4 cr, §RelS 5112; prereq jr or sr or grad)

Structure and function of rituals. Ritual as symbolic communication, religious action, and technique of social restructuring. Sacrifice, initiation, sacred dance, and other rituals. Theoretical and primary source readings.

5910. TOPICS IN COMPARATIVE STUDIES IN DISCOURSE AND SOCIETY. (4 cr; prereq jr or sr or grad)

Themes in comparative, sociohistorical analysis of discursive practices. Individually or team taught. Topics vary quarterly.

5970. DIRECTED STUDIES. (Cr ar; prereq grad, #)

Guided individual reading or study.

Individualized Studies Degree Program (B.I.S.)

Staff—Advisers, 220 Johnston Hall (612/624-8006)

The bachelor of individualized studies (B.I.S.) is an alternative degree program that provides certain types of flexibility not available in B.A. and B.S. programs. Programs are designed to meet individual educational goals and objectives. Coursework must be in three or more departments and may include up to 40 credits from outside CLA.

Working closely with a B.I.S. adviser, you develop an application that explains why your academic needs would best be met by an individualized program and lists the courses you propose to include in your program. You must submit an application by the end of the fifth week of the quarter in which you wish to be admitted to the B.I.S. program. If you are accepted, you will be referred to two or more faculty advisers for further assistance in planning your degree program. Formal admission is contingent upon receiving faculty approval of your program by the end of the quarter following acceptance into the B.I.S. program.

Study Abroad—You are strongly encouraged to include an overseas academic experience as part of your undergraduate study. Early planning for study abroad is important so that resulting credits will fit integrally into your B.I.S. program. For programs and procedural information, see Foreign Study.

Program Requirements

85 cr, including 75 at the 3xxx and 5xxx levels, approved for the degree program. These credits must be divided into three areas of study, which may be departmental or interdepartmental in composition, with a minimum of 20 cr at the 3xxx or 5xxx level in each area. Up to 40 cr may be from outside CLA.

A minimum of 60 cr must be completed at the University while enrolled in the B.I.S. program. At least 45 of these cr must be within the B.I.S. program.

A maximum of 20 cr of directed studies (3970 or 5970) and a maximum of 16 cr completed S-N may be included in a B.I.S. program.

One D grade in a 3xxx-or 5xxx-level course may be counted in the B.I.S. program, provided it is balanced by a B or A grade in a 3xxx- or 5xxx-level course in the same area of concentration.

A maximum of two D grades in 1xxx-level courses may be counted.

The 85 cr must include at least one CLA course in which a substantial piece of analytic writing is required.

The CLA requirement of 28 3xxx and 5xxx cr outside the major does not apply.

The CLA upper-level composition requirement must be satisfied by taking a 3xxx-level composition course related to one of your liberal arts areas of concentration, selected in consultation with your B.I.S. adviser.

Individually Designed Interdepartmental Major (IDIM)

Staff—Advisers, 220 Johnston Hall (612/624-8006)

The IDIM program enables students to fulfill the major program requirement for the B.A. degree through completion of an interdepartmental program of coursework focused on a theme of their own choosing, designed in consultation with faculty and staff advisers.

Thematic unity is a basic requirement of the IDIM program. Typical themes have been law and society, environmental policy studies, visual communications, and aspects of aging.

IDIM programs involve coursework from three or four areas, which may be departmental or interdepartmental in composition.

Working closely with an IDIM adviser, you develop a program proposal that explains your academic goals and lists a set of courses appropriate for meeting these goals. Admission to the IDIM program is based on approval of your program by the IDIM advisers and three faculty advisers with expertise in your areas of concentration.

Study Abroad—Study outside the United States can be an important component in this major. You are encouraged to decide on such study early in your major planning so that it can be integrated fully into your program theme. For information on options and procedures, see Foreign Study.

B.A. Major Sequence

Major Requirements—80 cr approved for the major program, distributed in three or four areas, with a minimum of 16 cr at the 3xxx or 5xxx level in each area. At least 60 of the 80 cr must be at the 3xxx or 5xxx level. You must complete at least 45 of the 60 3xxx-5xxx cr and at least 50 of the total 80 cr on A-F grading.

Senior project: minimum 3 cr, must be approved in advance by both faculty and staff advisers (part of the 80 cr total).

A minimum of 30 cr in the major must be completed after the program has been approved.

No more than 20 cr of directed study (3970 or 5970) may be applied toward the major. No course in which a grade of D has been earned may be applied toward the major.

The CLA requirement of 28 3xxx-5xxx cr outside the major does not apply.

Interdepartmental Study (ID)

Interdepartmental directed study registration provides opportunity for you to plan and carry out study and research in topics that are interdisciplinary and fall within the scope of more than one department or program. These opportunities, especially appropriate for interdepartmental majors, are available to all CLA students.

When planning an interdepartmental directed study (ID 3970) project, you work with two or more instructors and must receive college approval from the Office for Special Learning Opportunities (OSLO), 220 Johnston Hall. A project proposal is required; it should identify objectives, subject matter to be studied, proposed study methods, and means of evaluation as well as indicate the consent of instructors involved. Further information is available from OSLO.

3970. DIRECTED STUDIES. (1-15 cr per qtr; prereq OSLO approval, Δ)
Individual readings and research on topics that cross departmental lines.

Additional courses are offered through interdepartmental study. They are cross-disciplinary and sometimes experimental. These will vary; for other current offerings, see the *Class Schedule*.

3101. AN INTRODUCTION TO MARXISM. (4 cr)
Marxist philosophy; evolutionary and revolutionary processes of change; formation of class societies, capitalism, imperialism, paths to socialism; transition from socialism to communism.

3170. HECUA OFF-CAMPUS STUDY PROGRAM: METRO URBAN STUDIES TERM. (1-24 cr; prereq #; contact Carl Brandt, OSLO, 220 Johnston Hall, 612/624-7977)

Intensive off-campus fall or spring semester combining interdisciplinary field study, seminar work, and professional internship. Pedagogical approach blends structured field experiences with rigorous academic analysis. Twin Cities are source of interpretive materials for exploring contemporary urban life, social issues, relationships between subcultures/lifestyles, and ways of knowing.

3180. HECUA OFF-CAMPUS STUDY PROGRAM: CITY ARTS. (1-24 cr; prereq #; contact Carl Brandt, OSLO, 220 Johnston Hall, 612/624-7977)

Intensive off-campus fall or spring semester combining interdisciplinary field study, seminar work, and professional internship in Twin Cities area. Function of arts in urban society; organization of art worlds and design of cities as they relate to quality of urban life and other urban issues. Pedagogical approach blends diversity of structured field experiences with rigorous academic analysis.

3201. TOPICS IN CULTURAL PERSPECTIVE.

(5 cr; prereq Δ; students must meet with an OSLO adviser in 220 Johnston Hall before the first class session to obtain a course override and discuss internship possibilities)

Interdisciplinary study of AIDS/HIV integrating philosophical, medical, historical, artistic, and sociological approaches. Service or field learning projects enable review and critique of classroom materials to incorporate questions and issues that arise on site.

3251-3252†. METRO INTERN SEMINAR. (3-2 cr; prereq #; application through University YMCA, 1901 University Ave. S.E., Mpls., MN 55414, 612/624-3800)

Winter quarter seminar preparing interns for spring quarter internship in corporate social responsibility. Topics include ethics, leadership, power, and corporate culture.

Institute of Languages and Literatures (ILL)

The Institute of Languages and Literatures houses four programs: East Asian Languages and Literatures, Slavic and Central Asian Languages and Literatures, South Asian and Middle Eastern Languages and Cultures, and General and Applied Linguistics. Information about these programs is listed below.

Staff—Director, Leonard A. Polakiewicz, 103 Folwell Hall; **Acting Program Coordinators:** Wesley Jacobsen (EALL), Gary R.

Major Requirements and Course Descriptions

Jahn (SCALL), Indira Junghare (SAMELC); *Directors of Undergraduate Studies*, Irina Corten (SCALL), Indira Junghare (SAMELC); *Directors of Graduate Studies*, Steven Wang (EALL), M.A.R. Barker (SAMELC)

Professors Emeriti: Mather (Chinese), Matsumoto (Japanese)

Professors: Barker (SAMELC), Junghare (SAMELC), Liu (Chinese), S. Wang (Chinese)

Associate Professor Emeritus: Donchenko (Slavic Languages)

Associate Professors: Bashiri (SCALL), Jacobsen (EALL), Jahn (SCALL), Polakiewicz (SCALL)

Assistant Professor Emeritus: Prokopov (Slavic Languages)

Assistant Professors: Corten (SCALL), Decker (EALL), Monnet (EALL), Stanelow (SAMELC), Sztatrowski (EALL)

Lecturers, Teaching Specialists: Okada (teaching specialist, Japanese), Schweikert (teaching specialist, Russian), Walter (lecturer, Russian), Yanagimachi (teaching specialist, Japanese)

East Asian Languages and Literatures

East Asian Languages and Literatures deals with the languages of China and Japan as well as the literature and culture of East Asian societies. The department offers degrees in two areas—Chinese and Japanese. Students may emphasize language and literature or linguistics. Programs are planned in consultation with advisers. Students considering graduate work should begin their planning early to ensure appropriate preparation. Interested students may consult with the department's Undergraduate Advising Office, 107A Folwell Hall.

General Education—Courses that have no language requirement are particularly suitable for nonmajors interested in East Asia and for satisfying group distribution requirements. These include Chn 1201, 3161,

3162, 3163, 3165, and Jpn 3162, 3163, 3164, 3165.

Study Abroad—The department strongly encourages its majors and minors in Chinese and Japanese to spend some time, as much as a year if possible, living and studying in East Asia. The annual Minnesota Nankai Summer Intensive Chinese Language Institute is particularly recommended for Chinese majors. This institute offers 15 University of Minnesota quarter credits for the summer. In addition to Nankai University in Tianjin, individual study experiences can be arranged in Taiwan and Japan. For information on options and procedures, consult with the undergraduate adviser in East Asian Languages and Literatures or see Foreign Study in this section.

B.A. Major Sequence—Chinese

Required Preparatory Courses—1011-1012-1013, 3021-3022-3023

Major Requirements—Language sequences: 3021-3022-3023, 3031-3032-3033 (which may be taken concurrently with 3041-3042-3043), 3041-3042-3043

Literature/Linguistics courses: 3165

One course from: 3161, 3162, 3163

One course from: 5102, 5103, 5105, 5704

One course from: 5251, 5252

Major Project: One additional course in literature/linguistics. Students also take 3970 with the same instructor and do a senior project.

Minor Sequence—Chinese

Required Preparatory Courses—1011, 1012, 1013

Minor Requirements—3021, 3022, 3023

Two additional 3xxx or 5xxx Chinese courses, of which only one may be in directed or independent study

Program approval must be obtained from the department.

B.A. Major Sequence—Japanese

Required Preparatory Courses—1011-1012-1013, 3021-3022-3023

Major Requirements—3031, 3032, 3033, 3051, 3052, 3053

3451 (qualified students may substitute 5451 or 5452)
3163 or 3164

A minimum of two additional courses, including at least one at the 5xxx level, from the following: 3161, 3162, 3163, 3164, 3165, 5041, 5166, 5251, 5361, 5362, 5363, 5364, 5451, 5452

Major project: normally completed in conjunction with a 5xxx-level course chosen from above. Students should choose 5xxx-level course(s) with this purpose in mind.

Minor Sequence—Japanese

Required Preparatory Courses—1011, 1012, 1013

Minor Requirements—3021, 3022, 3023

Two additional 3xxx or 5xxx Japanese courses, of which only one may be in directed or independent study

Program approval must be obtained from the department.

5460. TOPICS IN EAST ASIAN LITERATURE.

(4 cr; prereq #; not for majors in the language of study)
Chinese or Japanese literature or themes prevalent in both. Open to students who do not read Chinese or Japanese; may serve as a cross-listed section to the Chinese or Japanese topics courses (5460) or may be offered separately.

Chinese (Chn)

1011f,su-1012w,su-1013s,su. BEGINNING MODERN CHINESE. (5 cr per qtr)

Speaking and reading modern standard Chinese through structured practice.

1202. HERITAGE OF CHINA: MEDIEVAL TO MODERN. (4 cr, §Hum 1202)

Chinese culture from 11th century to present: literature, philosophy, history, visual arts, and music. Western contacts and cultural upheaval. Primary texts read in translation.

3021f,su-3022w,su-3023s,su. INTERMEDIATE MODERN CHINESE. (5 cr per qtr; prereq 1013)

Modern standard Chinese, expanded through conversation and reading.

3031f-3032w-3033s. INTRODUCTORY CLASSICAL CHINESE. (4 cr per qtr; prereq 3023 or #) Staff

Extensive training in reading literary Chinese texts.
3031: Biographies from *Shih-chi*. 3032: *Mencius*. 3033: T'ang poetry.

3041f-su, 3042w-su, 3043s-su. THIRD-YEAR MODERN CHINESE. (4 cr per qtr, §5041-5042-5043; prereq for 3041—3023, prereq for 3042—3041, prereq for 3043—3042)

3041: Reading and analysis of 20th-century texts. 3042, 3043: Reading and analysis of vernacular texts.

3051su, 3052su. ADVANCED CHINESE CONVERSATION AND COMPOSITION. (4 cr per qtr, §5051, §5052; prereq 3023 or #)

Conversation and pronunciation. Exercises in composition and translation. English into Chinese.

3090. HONORS TUTORIAL. (1-4 cr per qtr; prereq Δ)

Individual projects.

3161. CHINESE POETRY IN ENGLISH TRANSLATION. (4 cr)

Major poets examined in context of their intellectual, social, and aesthetic traditions. Knowledge of Chinese not required.

3162. CHINESE FICTION IN ENGLISH TRANSLATION. (4 cr)

Chinese narrative prose, 1200 to 1900. Intellectual, social, and aesthetic traditions. Knowledge of Chinese not required.

3163. 20TH-CENTURY CHINESE LITERATURE IN ENGLISH. (4 cr)

Main trends in Chinese literature from May 4th period (circa 1919) to present. Knowledge of Chinese not required.

3165. INTRODUCTION TO CHINESE LITERATURE. (4 cr, §5165)

Survey of major Chinese literary movements from the emergence of the early Confucian Canon to the May 4th movement in 1919.

3970. DIRECTED STUDIES. (1-15 cr per qtr; prereq #, Δ, □)

Guided individual reading or study.

5041f-5042w-5043s. THIRD-YEAR MODERN CHINESE. (4 cr per qtr, §3041-3042-3043; prereq for 5041—3023, prereq for 5042—5041, prereq for 5043—5042)

For description, see 3041-3042-3043; additional work required.

5101. CONTEMPORARY CHINESE WRITING. (4 cr; prereq 3041)

Reading, translation, and discussion of representative works of Chinese authors since 1976.

Major Requirements and Course Descriptions

5102. READINGS IN MODERN CHINESE FICTION. (4 cr; prereq 3043 or #)

Reading and analysis of selected short fiction from 1918 to the present.

5103. PREMODERN CHINESE PROSE. (4 cr; prereq 3031 and 3041)

Reading of representative Chinese texts of the premodern periods.

5105. READINGS IN CHINESE VERNACULAR FICTION. (4 cr; prereq 3041)

Selections from great works of traditional fiction including short stories and novels such as *Journey to the West* and *Dream of the Red Chamber*.

5251. STRUCTURE OF STANDARD CHINESE.

(4 cr; prereq 1013, #; offered alt yrs with 5252) Wang
Phonological and syntactic structures of modern standard Chinese.

5252. HISTORY OF THE CHINESE LANGUAGE.

(4 cr; prereq 3031; Ling 3601 highly recommended; offered alt yrs with 5251)
Sources and methods in study of historical development of the Chinese language.

5451, 5452. STUDIES IN CHINESE LINGUISTICS.

(4 cr per qtr; prereq jr or #)
Syntax of modern standard Chinese, Chinese dialectology, Chinese historical phonology, grammar of classical Chinese.

5460. TOPICS IN CHINESE LITERATURE. (4 cr

per qtr; prereq 3031)
Texts from all periods of Chinese civilization and from all genres—poetic, expository, narrative, and dramatic. Topics announced in advance.

5471. CHINESE BIBLIOGRAPHY. (4 cr; prereq 3033 or #)

Primary sources and reference materials for study of Chinese humanities; designed to prepare students for independent research.

5472. RESEARCH METHODS. (4 cr; prereq 3033)

Philological and textual research in the Chinese humanities.

5704. EARLY CHINESE POETRY. (4 cr; prereq 5165 or #)

Selected major poets and poetic forms from first anthologies through the 12th century.

5970. DIRECTED STUDIES. (1-4 cr per qtr; prereq Δ)

Guided individual reading or study.

Japanese (Jpn)

1011f,su-1012w,su-1013s,su. BEGINNING JAPANESE. (5 cr per qtr)

Reading, writing, and speaking Japanese.

3021f,su-3022w,su-3023s,su. INTERMEDIATE JAPANESE. (5 cr per qtr; prereq 1013)

Foundation for reading knowledge of Japanese. Review and pattern drill.

3031f-3032w-3033s. THIRD-YEAR JAPANESE. (5 cr per qtr; prereq 3023)

Hearing, speaking, reading, and writing Japanese. Development of reading proficiency in modern Japanese prose and poetry. Formal written Japanese.

3051f, 3052w, 3053s. ADVANCED JAPANESE CONVERSATION AND COMPOSITION. (4 cr per qtr, §5051, 5052, 5053; prereq 3033 or #)

Verbal expression, oral and written; grammar review; idioms and nuances; short compositions, correspondence.

3090. HONORS TUTORIAL. (1-4 cr per qtr; prereq Δ)

Individual projects.

3161. MODERN JAPANESE LITERATURE AND WESTERN CULTURE. (4 cr)

Reading of modern Japanese novels in translation by authors significantly influenced by the impact of Western culture after 1900; how these writers reacted and the consequences on the development of modern Japanese fiction.

3163. TRADITIONAL LITERATURE OF JAPAN IN ENGLISH TRANSLATION. (4 cr)

Intellectual, social, and aesthetic traditions of prose and poetry. Reading knowledge of Japanese not required.

3164. MODERN JAPANESE LITERATURE IN ENGLISH TRANSLATION. (4 cr)

Twentieth-century Japanese literature examined in context of traditional expression. Knowledge of Japanese not required.

3165. JAPANESE PERFORMANCE ARTS. (4 cr)

A survey of Japanese performance traditions, with emphasis on No, Kabuki, and Bunraku, in their literary and cultural contexts, and the relationship between these traditions and the evolution of avant-garde performance practices.

3451. INTRODUCTION TO JAPANESE LINGUISTICS. (4 cr; prereq 3023 or #)

Introduction to basic issues in the study of form, meaning, and their interrelationship in the Japanese language.

3970. DIRECTED STUDIES. (1-15 cr; prereq #, Δ, □)

Guided individual reading or study.

5041f-5042w-5043s. CLASSICAL JAPANESE. (5 cr per qtr; prereq 3033)

Classical Japanese; masterpieces of Japanese literature in classical language; grammatical construction.

5051, 5052, 5053. ADVANCED JAPANESE CONVERSATION AND COMPOSITION. (4 cr; prereq 3033 or #)

Verbal expression, oral and written; grammar review; idioms and nuances; short compositions, correspondence.

5166. LITERATURE BY 20TH-CENTURY JAPANESE WOMEN. (4 cr; prereq 3031 for Japanese majors)

Analysis of fiction and nonfiction writings by 20th-century Japanese women.

5251. HISTORY OF JAPANESE LANGUAGE. (4 cr; prereq 3033 or 5451 or #; offered alt yrs)

Development of Japanese grammar from classical to modern language.

5361, 5362. READINGS IN MODERN JAPANESE LITERATURE I. (4 cr per qtr; prereq 3031)

Traditionalist and aesthetic authors of 19th- and 20th-century Japan.

5363, 5364. READINGS IN MODERN JAPANESE LITERATURE II. (4 cr per qtr; prereq 3031)

Realist, naturalist, and humanist authors of 19th- and 20th-century Japan.

5451. STRUCTURE OF JAPANESE: SYNTAX/ SEMANTICS. (4 cr; prereq 3023, Ling 3001 or #; offered alt yrs) Jacobsen

Analysis of structure and meaning of Japanese sentence patterns.

5452. STRUCTURE OF JAPANESE: PHONOLOGY/MORPHOLOGY. (4 cr; prereq 3023, Ling 3001 or #; offered alt yrs)

Generative and nongenerative approaches to Japanese sound structure and word structure.

5453. STRUCTURE OF JAPANESE—DISCOURSE/ CONVERSATIONAL ANALYSIS. (4 cr; prereq 3023, Ling 3001 or #)

Analysis of Japanese written texts and conversations. Emergence of grammar in discourse, discourse/ conversational structural units, patterns genre, strategies, style, and sociolinguistic variables.

5460. TOPICS IN JAPANESE LITERATURE. (4 cr; prereq 3033)

Japanese literature in the context of culture and intellectual history.

5471. RESEARCH METHODS. (4 cr; prereq 3033)

Philological and textual research in Japanese sources.

5650. PROSEMINAR: JAPANESE LINGUISTICS. (4 cr per qtr [12 cr max]; prereq 5451 or #; offered alt yrs)

Selected topics from the syntax, pragmatics, and lexicon of Japanese and/or comparative English and Japanese.

5970. DIRECTED STUDIES. (1-15 cr; prereq #, Δ, □)

Guided individual reading or study.

Slavic and Central Asian Languages and Literatures

The Department of Slavic and Central Asian Languages and Literatures offers study of Russian, Polish, and Iranian and Turkic languages of Central Asia as well as literature and culture of the Slavic world and of Central Asia. The department offers a major and a minor in Russian language and literature.

General Education—Courses recommended for general education are Russ 3421, 3422, 5211, CAS 3531

Study Abroad—The department recommends strongly that its undergraduates complete their coursework with firsthand knowledge of the former U.S.S.R., Eastern Europe, and/or Central Asia by studying abroad at least a semester. Several University-sponsored study abroad opportunities are available. These include summer, semester, and academic-year programs at St. Petersburg State University and a summer and academic-year Polish program at Marie Curie-Sklodowska University, Lublin, Poland. For further information on study abroad options and procedures, see Foreign Study.

B.A. Major Sequence—Russian

Required Preparatory Courses—1101-1102-1103, 1104-1105-1106 or equiv

Major Requirements—3101-3102-3103, 3111-3112-3113, 3311, 3421, 3422

4 electives (16 cr) from 3xxx and 5xxx Russian courses

Russ 3311 or 3311H

For requirements for teaching licensure, see the *College of Education Bulletin*.

Minor Sequence—Russian

Required Preparatory Courses—1101-1102-1103, 1104-1105-1106

Major Requirements and Course Descriptions

Minor Requirements—3101-3102-3103,
8 additional cr in 3xxx-5xxx Russian
courses

Russian (Russ)

1101f-1102w-1103s. BEGINNING RUSSIAN. (5 cr
per qtr; 5 class meetings per wk)
Speaking, reading, and understanding Russian through
acquisition of basic patterns of speech.

1104f-1105w-1106s. INTERMEDIATE RUSSIAN.
(4 cr per qtr; prereq 1103)
Expansion of experience in speaking, reading, and un-
derstanding Russian; reading contemporary texts.

3101-3102-3103. THIRD-YEAR RUSSIAN. (4 cr per
qtr; prereq 1106)
Conversation, composition, grammar review, transla-
tion, and readings in appropriate literature.

**3104f. INTRODUCTION TO LITERARY ANALY-
SIS.** (4 cr; prereq 3103)
Advanced composition and conversation. The structural-
ist approach to the study of literature; applied to reading
and analyzing selected short stories and plays. Taught in
Russian.

**3105w. READING OF RUSSIAN POETRY AND
NOVEL.** (4 cr; prereq 3104)
Appreciation of literary values through stylistic analysis
and literary interpretation; analysis of humanistic ele-
ments. Taught in Russian.

3106s. THE CURRENT SOVIET SCENE. (4 cr; pre-
req 3105)
Current Soviet values as reflected in literature, the
press, and other media. Taught in Russian.

3111-3112-3113. FOURTH YEAR RUSSIAN. (4 cr;
prereq 3103 or #)
Advanced speaking and writing Russian.

3311. MAJOR PROJECT IN RUSSIAN. (2 cr; prereq
#)
Students complete the major project under supervision
of professors of their choice. A detailed description of
the project requirements is available from the depart-
ment.

3311H. MAJOR PROJECT IN RUSSIAN. (2-4 cr;
prereq #)
For description, see 3311.

**3421. LITERATURE: MIDDLE AGES TO DOSTO-
EVSKY IN TRANSLATION.** (4 cr, §5421; prereq
1106 or equiv for Russian majors)
Survey of Russian literature from circa A.D. 1000
through the mid-19th century, emphasizing writers of
the first half of 19th century.

**3422. LITERATURE: TOLSTOY TO THE
PRESENT IN TRANSLATION.** (4 cr, §5422; prereq
1106 or # for Russian majors)
Russian literature from mid-19th century to present.
Realism, modernism, socialist realism, and other devel-
opments since 1917.

**3511. RUSSIAN CULTURE TO THE MID-19TH
CENTURY.** (4 cr; prereq 1106 for Russian majors)
Aspects of folk and "high" culture, their interrelation-
ship and development in Russia from earliest times to
the mid-19th century. Arts emphasized.

**3512. RUSSIAN CULTURE MID-19TH CENTURY
TO PRESENT.** (4 cr; prereq 1106 for Russian majors)
Development of national school of arts in the 19th cen-
tury and the influence of social and political thought on
them; themes and forms of the arts in the immediate
pre-revolutionary and Soviet times; social institutions
and their development, with emphasis on the Soviet
period.

3970. DIRECTED STUDIES. (3-5 cr per qtr; prereq
Δ)
Guided individual reading or study.

5104. INTRODUCTION TO LITERARY ANALYSIS.
(4 cr; prereq 3103 or equiv, not open to Russian lan-
guage and literature majors)
Reading and analyzing selected short stories using
structural and psychological approaches. Taught in Rus-
sian.

**5105. READING OF RUSSIAN POETRY AND
NOVEL.** (4 cr; prereq 5104 or equiv, not open to Rus-
sian language and literature majors)
Development of Russian novel and poetry through anal-
ysis of selected novels and poetry of major Russian
writers and poets. Taught in Russian.

5106. CURRENT SOVIET SCENE. (4 cr; prereq
5105 or equiv, not open to Russian language and litera-
ture majors)
Current cultural and social issues in the Soviet Union
through analysis of selected literary works and texts
from Soviet newspapers and periodicals. Taught in Rus-
sian.

**5211. MODERN RUSSIAN LITERATURE IN
TRANSLATION.** (4 cr)
Literary merits as well as cultural and political signifi-
cance of the important works of Soviet Russian litera-
ture (1917 to present) by officially accepted and
dissident authors.

5401. DOSTOEVSKY IN TRANSLATION. (4 cr)
Novels.

5404. TOLSTOY IN TRANSLATION. (4 cr)
Novels, stories, dramas.

**5407. STORIES AND PLAYS OF ANTON CHEK-
HOV IN TRANSLATION.** (4 cr)
Prose works and major plays. An intrinsic approach.

5409. THE 19TH-CENTURY RUSSIAN NOVEL IN TRANSLATION. (4 cr)

The Russian realistic novel from origin to decline; social, political, and intellectual circumstances that led to its emergence as the dominant genre of the "age of realism" in Russia.

5421. LITERATURE: MIDDLE AGES—DOSTOEVSKY IN TRANSLATION. (4 cr, §3421)

Russian literature from circa A.D. 1000 to the mid-19th century, and the concurrent development of the Russian literary language from its Old East Slavic origins through Pushkin.

5422. LITERATURE: TOLSTOY TO THE PRESENT IN TRANSLATION. (4 cr, §3422)

Russian literature from the mid-19th century to the present. Realism, modernism, socialist realism, and other developments since 1917, with a view to language evolution and change.

5701f. STRUCTURE OF MODERN RUSSIAN. (4 cr per qtr; prereq 1106 or #)

5970. DIRECTED STUDIES. (1-3 cr per qtr; prereq #)

Guided individual reading or study.

East European Studies (EEur)

3970. DIRECTED READINGS IN EAST EUROPEAN STUDIES. (1-5 cr)

Guided individual reading or study.

Polish (Plsh)

1101f-1102w-1103s. BEGINNING POLISH. (5 cr per qtr)

Speaking, understanding, and reading basic Polish.

1104f-1105w-1106s. INTERMEDIATE POLISH.

(4 cr per qtr; prereq 1103 or #)
Grammar review, advanced texts, practice in speaking.

3601f, 3602w. SURVEY OF POLISH LITERATURE IN TRANSLATION. (4 cr per qtr)

5900. TOPICS. (4 cr)

Topics specified in *Class Schedule*.

5970. DIRECTED STUDIES. (1-4 cr per qtr; prereq #)

Guided individual reading or study.

Slavic (Slav)

3900. TOPICS IN RUSSIAN AND EAST EUROPEAN STUDIES. (4 cr per qtr [2 cr max])

Topics specified in *Class Schedule*.

5900. TOPICS IN RUSSIAN AND EAST EUROPEAN STUDIES. (4 cr per qtr [12 cr max])

Topics specified in *Class Schedule*.

Central Asian Studies (CAS)

3521. ISLAM AND COMMUNISM. (4 cr, §MELL 3521))

The development of medieval Islamic culture in Transoxiana; formation of Sufic orders; clash of Islamic principles with Soviet dicta; activities of the Islamic institutions and of the major Islamic centers in the former Soviet Union; Pan-Islamism.

3531. CENTRAL ASIAN CULTURE SPHERE. (4 cr)

Origins of Turkish and Mongol tribes of Central Asia; Turko-Mongol migrations westward; institution of the Golden Horde and, later, of smaller kingdoms; effects of sovietization/russification on the republics; Pan-Turkism.

3601. FICTION: IRAN AND CENTRAL ASIA. (4 cr, §MELL 3601)

Social, political, and religious thought of Iranian and Soviet Central Asian writers of fiction since the beginning of the 20th century, emphasizing the themes of tradition, modernization, women's rights, and secularization.

3611. INTRODUCTION TO THE CULTURE OF AFGHANISTAN. (4 cr)

Afghan culture from ancient times to the present. The emergence of modern Afghanistan (1880); the conflict between traditional Islamic values and modernization leading to the 1978 Saur Revolution and the formation of Mujahid resistance groups.

5311. MEDIEVAL SAGES: IRAN AND CENTRAL ASIA. (4 cr; some background in Iranian, Central Asian, or Islamic studies recommended)

Study and discussion of the intellectual life of the region from the rise of the Ghaznavids (A.D. 1000) to the fall of the Timurids (A.D. 1500).

5601. FICTION: IRAN AND CENTRAL ASIA. (4 cr, §MELC 5601)

For description, see 3601.

5900. READINGS IN AN IRANIAN LANGUAGE.

(1-4 cr per qtr [max 12 cr], §Per 5900; prereq 3013 or #) Bashiri
Pre-medieval and medieval Iranian texts. Topics specified in *Class Schedule*.

5990. DIRECTED RESEARCH. (Cr ar; prereq #)

South Asian and Middle Eastern Languages and Cultures (SAMELC)

Department of South Asian and Middle Eastern Languages and Cultures courses focus on the languages, literatures, cultural traditions, and contemporary problems of Afghanistan, Bangladesh, India, Iran, Nepal, Pakistan, Sri Lanka, Turkey, and the Arab world. Flexible major and minor pro-

Major Requirements and Course Descriptions

grams in South Asian and Middle Eastern Languages and Cultures are designed to meet the needs and interests of individual students.

Also, see Area Studies programs for a description of the South Asian and Middle Eastern Studies degrees.

General Education—Courses under the headings South Asian Languages and Literatures and Middle Eastern Languages and Cultures, given in English translation, are suitable for nonmajors.

Study Abroad—The study abroad experience can provide an important comparative perspective within various cultural paradigms. Various study abroad opportunities are available and appropriate courses taken abroad can be applied toward a major. See also Foreign Study.

B.A. Major Sequence—South Asian and Middle Eastern Languages and Cultures

Major Requirements—two years (six quarters) in one language of the Middle East or South Asia

Four 3xxx-5xxx literature courses
Literature Requirement: 8-12 credits
Culture Requirement: 16-20 credits

Middle Eastern Languages and Cultures (MELC)

1536. THE RELIGION OF ISLAM. (4 cr, §3036, §RelS 1036, 3036, 5036; §SALC 3036, 5036) Barker, Farah

The rise of Islam in historical context; the role of Muhammad, Koran, traditions; fundamentals and observances of the faith; sectarian movements; the spread of Islam into Asia and Africa; Baha'i and Black Muslim components; reformist movements and change.

3036. THE RELIGION OF ISLAM. (4 cr, §1536, 5036, §RelS 3036, 5036) Barker, Farah
The evolution of Islam in historical context; institutions that made for diversity and continuity; traditions, laws, and observances of the faith; sectarian movements; philosophical and theological trends; modern developments; reformist, revolutionary, and militant.

3213. THE QUR'AN AS LITERATURE. (4 cr, §Arab 3213, RelS 3213)

Texts and commentaries in translation. Knowledge of Arabic not required.

3505. SURVEY: THE MIDDLE EAST. (4 cr, §5505, §Hist 3505) Farah

Cultural, religious, and scholarly achievements of Middle Eastern peoples from pre-Islamic times to the present.

3508. ISLAM: IRAN TO INDIA. (4 cr, §5508)

Islam as a faith; formation of Perso-Islamic civilizations; historical, religious and cultural developments from the Samanids to the revolution; Islam in South Asia; configuration of Indo-Islamic heritage; Sufi orders; syncretic and revivalist movements; challenges of modernity, contemporary Islam in India and Pakistan.

3511. ANCIENT IRAN. (4 cr)

Iranian civilization from the Achaemenids to the rise of the Samanids: the role of the common person.

3512. MODERN IRAN. (4 cr)

From the fall of the Samanids to the present: the role of the common person.

3521. ISLAM AND COMMUNISM. (4 cr, §CAS 3521)

The development of medieval Islamic culture in Transoxiana; formation of the Sufic orders; clash of Islamic principles with Soviet dicta; activities of the Islamic institutions and of the major Islamic centers in the former Soviet Union; Pan-Islamism.

3555. ZOROASTRIANISM. (4 cr) Bashiri

Historical survey from the prophet Zarathustra to modern survivals in Iran and India.

3601. FICTION: IRAN AND CENTRAL ASIA.

(4 cr, §5601, §CAS 3601) Bashiri
Social, political, and religious thought of Iranian and Central Asian fiction writers since the beginning of the 20th century, emphasizing the themes of tradition, modernization, women's rights, and secularization.

3602. PERSIAN POETRY IN TRANSLATION.

(4 cr, §5602)
Major poetic works of Iran: quatrains of Omar Khayyam, sonnets of Hafiz; "new" Persian poetry such as works of Farough Farrokhzad.

3970. DIRECTED STUDIES. (1-15 cr per qtr; prereq #)

Guided individual reading or study. Open to qualified students for one or more quarters.

3990. DIRECTED RESEARCH. (1-15 cr per qtr; prereq #)

Qualified students, with consent of instructor, work on a tutorial basis.

5001. INTRODUCTION TO RESEARCH IN ARABIC STUDIES. (4 cr, §Arab 5001)

Medieval and modern works in Arabic literature and Islam. Research bibliographies in Arabic and Islamic Studies, presented in English and Arabic.

5036. THE RELIGION OF ISLAM. (4 cr, §3036, §ReIS 3036, 5036)

For description see 3036.

5311. MEDIEVAL SAGES: IRAN AND CENTRAL ASIA. (4 cr, §CAS 5311; some background in Iranian, Central Asian, or Islamic studies recommended)
Study and discussion of the intellectual life of the region from the rise of the Ghaznavids (A.D. 1000) to the fall of the Timurids (A.D. 1500).

5508. ISLAM: IRAN TO INDIA. (4 cr, §MELC 3508) Barker

For description, see 3508.

5601. FICTION: IRAN AND CENTRAL ASIA. (4 cr, §CAS 5601)

For description, see 3601.

5602. PERSIAN POETRY IN TRANSLATION. (4 cr, §3602)

For description see 3602.

5940. TOPICS PROSEMINAR. (1-4 cr; prereq #)
Selected topics on language, literature, or civilization.

5960. TOPICS IN MIDDLE EASTERN LANGUAGES AND CULTURES. (4 cr)

Topics specified in *Class Schedule*.

5970. DIRECTED STUDIES. (Cr ar)
Guided individual reading or study.

5990. DIRECTED STUDIES. (Cr ar)

Middle Eastern Languages

Arabic (Arab)

1101-1102-1103. BEGINNING ARABIC. (5 cr per qtr)

Fundamentals of Arabic based on an audiolingual method; aural comprehension, pronunciation, practical reading knowledge. Basic grammar.

1201-1202-1203. COLLOQUIAL ARABIC. (5 cr per qtr; offered through Extension)

Introductory course intended primarily for business persons and travelers. Fundamentals of vocabulary and sentence structure; introduction to Arabic script.

3101-3102-3103. INTERMEDIATE ARABIC. (4 cr per qtr, prereq 1103 or #)

Review of grammar; analysis of cultural and literary texts; contemporary short stories (third qtr).

3213. THE QUR'AN AS LITERATURE. (4 cr, §MELL 3213, ReIS 3213; prereq #)

Texts and commentaries in translation. Knowledge of Arabic not required.

5101-5102-5103. ADVANCED LITERARY ARABIC AND COMPOSITION. (5 cr per qtr; prereq 3103 or #)

Literary styles and genres in classical and modern writings. Compositions based on texts.

5900. TOPICS IN ARABIC LITERATURE. (4 cr per qtr [12 cr max]; prereq 5103 or #)

Readings and discussions of selected classical works in Arabic. Topics specified in *Class Schedule*.

5970. DIRECTED READINGS. (Cr ar; prereq 5103 or #)

Special problems for advanced students. Reading and periodic consultations.

5990. HONORS COURSE: RESEARCH. (Cr ar; prereq 5970 or #)

Individual studies for honors work at advanced level.

Persian (Per)

Persian, the language of Iran, also is spoken in Afghanistan and Tadjikistan. Classical Persian is used by Indian Muslims as a literary language.

5900. READINGS IN AN IRANIAN LANGUAGE. (1-4 cr per qtr [max 12 cr], §CAS 5900; prereq 3013 or #)

Pre-medieval and medieval Iranian texts. Topics specified in *Class Schedule*.

5970. DIRECTED READINGS. (Cr ar; prereq 3013 or #)

Special problems for advanced students. Readings and periodic consultations.

5990. DIRECTED RESEARCH. (4 cr per qtr [12 cr max]; prereq 3013 or #)

Application of modern analytical techniques to the study of medieval and modern Persian texts.

Turkish (Turk)

Turkish, primarily the language of Turkey, also is spoken in its various dialects in Azerbaijan, in Iran, and in Central Asia.

1101-1102-1103. BEGINNING TURKISH. (5 cr per qtr)

Vocabulary forms and syntax; intensive graded reading and speaking.

5970. DIRECTED READINGS. (Cr ar; prereq 1103 or #)

Special problems for advanced students.

South Asian Languages and Cultures (SALC)

1506. INTRODUCTION TO CONTEMPORARY SOUTH ASIA. (5 cr, §3506)

Land, people, modern historical development, contemporary problems, global setting, and future of India and adjacent countries of South Asia.

Major Requirements and Course Descriptions

3036. THE RELIGION OF ISLAM. (4 cr, §1536, 5036, §MELC 3036, §RelS 1036, 3036, 5036)

The evolution of Islam in historical context; institutions that made for diversity and continuity: traditions, law and observances of the faith; sectarian movements; philosophical and theological trends; modern developments: reformist, revolutionary, and militant.

3201. ANCIENT INDIAN LITERATURE IN TRANSLATION. (4 cr, §5201)

Literary achievement of Indian civilization from the ancient period.

3202. MODERN INDIAN LITERATURE IN TRANSLATION. (4 cr, §5202)

Literary achievements of Indian civilization from the modern period.

3203. COMPARATIVE INDIAN LITERATURE IN THE MODERN PERIOD. (4 cr, §5203)

Comparative Indian literature in the modern period.

3204. FOLKLORE OF INDIA. (4 cr)

Main genres of Indian folklore: folk tales, folk songs, folk epics, folk dramas, proverbs, and riddles; their relationship to Indian society and interrelationship with the literary traditions, both great and small.

3411. INTRODUCTION TO INDIAN PHILOSOPHY. (4 cr, §5511)

Major concepts; principal schools of Indian philosophy; traditional and contemporary views.

3412. HINDUISM. (4 cr, §5412, §RelS 3412, §RelS 5412; prereq 1504 or 3411 or RelS 1031 or #)

Development of Hinduism, focusing on sectarian trends, modern religious practices, myths and rituals, pilgrimage patterns and religious festivals, and the inter-relationship between Indian social structure and Hinduism.

3413. BUDDHISM. (4 cr; §5413)

Historical account of Buddhist religion in terms of its rise, development, various schools, and common philosophical concept. Indian Buddhism, compared with Hinduism; Buddhism's demise and revival on the Indian subcontinent.

3414. COMPARATIVE RELIGIONS OF SOUTH ASIA. (4 cr, §5414)

Compares and contrasts basic philosophical concepts, literatures, ideologies, and ritualistic practices of Hinduism, Buddhism, and Jainism with those of Islam and Sikhism.

3456. THE CINEMA OF INDIA. (4 cr)

Survey of cinema of South Asia; aesthetic, social, economic and political perspectives.

3501, 3502. THE HERITAGE OF INDIA. (4 cr per qtr)

Contemporary civilization in light of its development. Social, cultural, economic, and political life. Hindu, Muslim, and Buddhist contributions.

3506. INTRODUCTION TO CONTEMPORARY SOUTH ASIA. (4 cr, §1506)

For description, see 1506.

3521. GANDHI AND NON-VIOLENT REVOLUTION. (4 cr)

Character of Gandhi, his influence over contemporaries, and his hold on the world today.

3556. WOMEN IN INDIA: ROLE AND REPRESENTATION. (4 cr)

Representation of Indian women studied through literature of contemporary Indian women and against background of traditional Indian values and roles.

3607. INDIAN CULTURE: PAST AND PRESENT. (4 cr)

Traditional cultures of India and their effects on modernity.

3710. TOPICS. (1-4 cr; prereq #)

Selected topics on language, literature, or civilization.

3970. DIRECTED STUDIES. (1-15 cr per qtr; prereq #)

Guided individual reading or study. Open to qualified students for one or more quarters.

3990. DIRECTED RESEARCH. (1-15 cr per qtr; prereq #)

Qualified students, with consent of instructor, work on a tutorial basis.

5011. INDO-ARYAN LINGUISTICS. (4 cr)

Phonological, morphological, and syntactic developments; Indo-European, Old Indo-Aryan, Middle Indo-Aryan, Hindi, and other major modern Indo-Aryan languages.

5036. THE RELIGION OF ISLAM. (4 cr, §3036, §RelS 3036, 5036)

For description, see 3036.

5090. INSTRUCTION IN SOUTH ASIAN LANGUAGES. (Cr ar)

5201. ANCIENT INDIAN LITERATURE IN TRANSLATION. (4 cr, §3201)

Literary achievements of the Indian civilization from the ancient period.

5202. MODERN INDIAN LITERATURE IN TRANSLATION. (4 cr)

Literary achievements of Indian civilization from the modern period.

5203. COMPARATIVE INDIAN LITERATURE IN TRANSLATION. (4 cr, §3203)

Comparative Indian literature in the modern period.

5204. FOLKLORE OF INDIA. (4 cr, §3204)

For description see 3204.

5232. EARLY BUDDHISM, CASTE, AND CHAUVINISM. (4 cr, §RelS 5232, §Hum 5232; prereq jr or sr or grad or #)

Polemics and intellectual-social implications of early Buddhist rejection of Indian religion's caste traditions that opened the door to the conversion of non-Hindus and the missionary expansion of Buddhism.

5411. INTRODUCTION TO INDIAN PHILOSOPHY. (4 cr, §3411)

For description see 3411.

5412. HINDUISM. (4 cr, §3412)

For description see 3412.

5413. BUDDHISM. (4 cr; §3413)

For description see 3413.

5414. COMPARATIVE RELIGIONS OF SOUTH ASIA. (4 cr, §3414)

For description see 3413.

5500. PROBLEMS IN INDIAN PHILOSOPHY.

(4 cr, §Phil 5801; prereq 5 cr of philosophy, 4 cr of Indian philosophy or religion or #) Jungbare Problems of philosophy in India; analyses of mind and knowledge.

5520. STUDIES IN THE RELIGIONS OF INDIA.

(Cr ar)

Topics in India's religious history.

5535. TRIBAL PEOPLES AND CULTURES OF SOUTH ASIA. (5 cr; prereq 1504, 1506, 3501 or 3506 recommended)

Major populations; social and political organization of tribal groups; social change and effects of contact with Hindu caste society; world view of tribal groups in literature and religious symbolism.

5710. SEMINAR IN SOUTH ASIAN LANGUAGES AND LITERATURE. (Cr ar)

5833. INDIA'S GODS AND GODDESSES. (4 cr, §Hum 5833; prereq 1504 or Hum 1211 or RelS 1031 or equiv, jr or sr or #)

Indian history examined by following development of deities Krishna, Shiva, and Kali. Interactions of region, gender, class, in art, drama, literature, and ideology.

5960. TOPICS IN SOUTH ASIAN LANGUAGES AND CULTURES. (4 cr) Staff

Topics defined in *Class Schedule*.

5970. DIRECTED STUDIES. (Cr ar)

Guided individual reading or study.

5990. DIRECTED RESEARCH. (Cr ar)

South Asian Languages

Hindi (Hndi)

Hindi is spoken by approximately 350 million people in India. It is an official language of India.

1101f-1102w-1103s. BEGINNING HINDI. (5 cr per qtr)

5131f-5132w-5133s. INTERMEDIATE HINDI. (5 cr per qtr; prereq 1103 or #)

5161f-5162w-5163s. ADVANCED HINDI. (4 cr per qtr; prereq 5133 or #)

5710. TOPICS IN HINDI LANGUAGE AND LITERATURE. (5 cr per qtr; prereq # for nonmajors)
Topics in Hindi literature or the linguistic structure of Hindi.

5970. DIRECTED READINGS. (Cr ar; prereq #)
Staff

Guided individual reading or study.

5990. DIRECTED RESEARCH. (Cr ar; prereq #)
Staff

Marathi (Mar)

Marathi is spoken by approximately 65 million people in western India. It is one of the principal regional languages of India.

1101f-1102w-1103s. BEGINNING MARATHI. (5 cr per qtr)

5970. DIRECTED READINGS. (Cr ar; prereq #)
Guided individual reading or study.

5990. DIRECTED RESEARCH. (Cr ar; prereq #)

Sanskrit (Skt)

Sanskrit, a major classical language, is the linguistic source of modern North Indian languages and a powerful influence on the South Indian languages.

5131f-5132w-5133s. BEGINNING SANSKRIT. (5 cr per qtr)

5161f-5162w-5163s. ADVANCED SANSKRIT. (4 cr per qtr; prereq 5203)

5201f-5202w-5203s. INTERMEDIATE SANSKRIT. (5 cr per qtr; prereq 5133 or #)

5970. DIRECTED READINGS. (Cr ar; prereq #)
Staff

Guided individual reading or study.

5990. DIRECTED RESEARCH. (Cr ar; prereq #)
Staff

Urdu (Urdu)

Urdu is a closely related variant of Hindi. It is written in the Arabic script and is the national language of Pakistan. It is spoken in both India and Pakistan by approximately 95 million people.

1101f-1102w-1103s. BEGINNING URDU. (5 cr per qtr)

Major Requirements and Course Descriptions

5131f-5132w-5133s. INTERMEDIATE URDU. (5 cr per qtr; prereq Hndi 1103 or #)

5161f-5162w-5163s. ADVANCED URDU. (4 cr per qtr; prereq 5133 or #)

5970. DIRECTED READINGS. (Cr ar; prereq #)
Guided individual reading or study.

5990. DIRECTED RESEARCH. (Cr ar; prereq #)
Staff

General and Applied Linguistics (Ling)

Linguistics is the science of human language and the principles governing its structure, acquisition, use, and change.

For additional information about the B.A. major and the linguistics program, contact the CLA Student Information Office, 214 Johnston Hall (612/625-2020).

1005. LANGUAGE AND SOCIETY. (4 cr)
The role of language in human social interaction; linguistic indicators of social status and attitudes; language and sex roles; linguistic ecology; language planning for multilingual communities; implications for educational and public policy.

3001. INTRODUCTION TO LINGUISTICS. (5 cr, §5001)
Phonetics, phonology, morphology, syntax, semantics, and historical-comparative linguistics; language learning and psychology of language; linguistic universals; language in society.

3001H. HONORS COURSE: INTRODUCTION TO LINGUISTICS. (5 cr, §3001, §5001; prereq honors regis or #)
For description, see 3001.

3101. LANGUAGES OF THE WORLD. (4 cr; prereq 1001 or 3001 or #)
Survey of language families of the world; classifying languages genetically and typologically; historical relationships among languages.

3111. WRITING SYSTEMS AND DECIPHERMENT. (4 cr)
The origin and history of writing. Types of writing systems. Alphabetic scripts and transliterations. Relationships between writing and speech. Codes and code breaking. Decipherment of ancient languages.

3301f. PHONETICS. (5 cr, §5003, §5301; prereq 3001 or ¶3001 or #)
Production, acoustics, and perception of speech sounds; practice in production and perception.

3601. INTRODUCTION TO HISTORICAL LINGUISTICS. (4 cr, §5601; prereq 3001 or #)
Historical change in phonology, syntax, semantics and the lexicon; linguistic reconstruction; genetic relationship among languages.

3811. BILINGUALISM. (4 cr; some knowledge of linguistics and a second language helpful)
Language use in multilingual societies throughout the world; language ecology; psychological aspects of bilingualism; language in ethnic conflict; public policy and planning issues.

3812. ETHNIC BILINGUALISM IN THE UNITED STATES. (4 cr; some knowledge of linguistics and a second language helpful)
The linguistic experience of American immigrants and ethnic minority groups, especially Asian Americans; public policy implications; field experience in bilingual communities.

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq linguistics major, #)
Guided individual reading or study.

3971. SENIOR PROJECT. (1 cr; prereq linguistics major, #; S-N only)
Revision and/or expansion of a paper completed for a linguistics course.

5001. INTRODUCTION TO LINGUISTICS. (5 cr, §3001, §3005; prereq grad or #)
For description, see 3001.

5002. LINGUISTIC ANALYSIS. (4 cr, §5201, §5302; prereq 3001 or 5001 or #; S-N only)
Techniques for analyzing phonological, morphological, and syntactic data from a variety of languages; discovering, stating, and justifying generalizations; comparison of diverse languages.

5003. APPLIED PHONETICS. (5 cr, §3301, §5301; prereq 5001 or ¶5001 or #; not open to linguistics majors)
Primarily for teachers of English as a second language.

5006. EXPERIMENTAL PHONETICS. (4 cr; prereq 3301 or 5301 or #)
Physiological and instrumental studies of speech. Laboratory.

5011-5012. MATHEMATICAL LINGUISTICS. (4 cr per qtr; prereq linguistics major or #)
The propositional and first-order predicate calculi; non-classical logics; set theory; axiomatics; algebra; grammar; automata theory.

5101. LANGUAGE TYPES AND LINGUISTIC UNIVERSALS. (4 cr; prereq 3001 or 5001 or #)
Comparison of languages and language types; cross-linguistic similarities and universals of language, and their explanation.

5201w-5202s. INTRODUCTION TO SYNTAX. (4 cr per qtr; prereq 3001 or 5001 or #)
5201: Principles of grammar construction and evaluation; syntactic phenomena in a variety of languages.
5202: Modern syntactic theory.

5206. ADVANCED SYNTAX. (4 cr; prereq 5202, 5302 or #)

The nature of syntactic argumentation; validation and comparison of theories, models, and analyses.

5211. SEMANTICS. (4 cr; prereq 5011, 5202 or #)
Linguistic analysis and explanation of synonymy, analyticity, presupposition, and other meaning phenomena in natural language; alternative theories of meaning.

5212. LINGUISTIC PRAGMATICS. (4 cr; prereq 5002 or 5201 or #)

Analysis and description of linguistic phenomena in relation to beliefs and intentions of language users; speech act theory, conversational implicature, shared knowledge and presupposition, topic-comment structure, discourse coherence.

5301f. PHONETICS. (5 cr, §3301, §5003; prereq 3001 or 5001 or ¶5001 or #)

For description, see 3301.

5302w-5303s. INTRODUCTION TO PHONOLOGY.

(4 cr per qtr; prereq 3301 or 5301 or #)

5302: Formulation and evaluation of phonological descriptions and examination of phonological processes in a variety of languages. **5303:** Current approaches to phonological theory; metrical, autosegmental, and lexical phonology.

5401-5402. COMPUTATIONAL LINGUISTICS.

(4 cr per qtr; prereq 3001 or #; some programming experience helpful; offered through Extension)

5401: Methods and issues in computer understanding of natural language. The LISP and Prolog programming languages, with emphasis on their linguistic applications. Laboratory projects.

5601. INTRODUCTION TO HISTORICAL LINGUISTICS. (4 cr, §3601; prereq 3001 or 5001 or #)

For description, see 3601.

5602. PHONOLOGICAL CHANGE AND RECONSTRUCTION. (4 cr; prereq 3601 or 5601, 5302 or #)

Change in phonological systems; factors underlying phonological change; internal and comparative reconstruction in phonology.

5606. INDO-EUROPEAN LINGUISTICS. (4 cr; prereq 3601 or 5601 or #)

Reconstruction of Proto-Indo-European phonology, morphology, and syntax; principal developments in major Indo-European languages.

5701. INTRODUCTION TO SECOND-LANGUAGE ACQUISITION. (4 cr; prereq 5002 or 5201, 5302, 5003 or #)

Overview of second-language acquisition and processing; implications for second-language teaching.

5702. SECOND-LANGUAGE ACQUISITION.

(4 cr; prereq 5002 or 5201, 5302, 5701 or ¶5701 or #)
Empirical and theoretical studies of second-language acquisition and processing.

5711-5712. FIELD METHODS IN LINGUISTICS.

(4 cr per qtr; prereq 5202, 5303 or #)

Techniques for obtaining and analyzing linguistic data from unfamiliar languages through direct interaction with a native speaker.

5721. ENGLISH AS A SECOND LANGUAGE: METHODS. (4 cr; prereq 3001 or 5001 or #)

Linguistics applied to teaching English as a second language.

5722. ENGLISH AS A SECOND LANGUAGE:

PRACTICUM. (4 cr; prereq major or minor in English as a second language, 5721, #; S-N only)

Observation of and practice in teaching English as a second language.

5723. ENGLISH AS A SECOND LANGUAGE: MATERIALS. (3 cr; prereq 5721, 5722, #)

Application of linguistics to evaluation and preparation of materials for teaching English as a second language.

5741-5742. LINGUISTIC DESCRIPTION OF MODERN ENGLISH. (4 cr per qtr; prereq 3001 or 5001 or #)

Word and sentence structure in present-day English.

5821. SOCIOLINGUISTICS. (4 cr; prereq 3001 or 5001 or #)

Social determinants of linguistic diversity, variability, and change; linguistic behavior and social control; methods of community-based linguistic research.

5910. SEMINAR IN LINGUISTICS. (4 cr per qtr; prereq #)

5970. DIRECTED STUDIES. (1-5 cr per qtr; prereq English as a second language or linguistics major, #)
Guided individual reading or study.

International Relations (IntR)

Staff—*Director of International Relations Program, Martin W. Sampson III, Director of Honors, John Turner, 214 Social Sciences Building; Undergraduate Advisers, 248 Social Sciences Building (612/624-9353)*

The International Relations major is an interdisciplinary program. It requires a combination of academic perspectives from various departments and offers students opportunities to reflect on that diversity of viewpoints in a major project at the end of their program. The program exists as an alternative to international concentrations in some departmental majors listed elsewhere in this bulletin.

Within the International Relations major students choose one of six curricular op-

tions or "tracks." The tracks are diplomacy and interstate relations, international development, international political economy, international relations and the environment, international relations/Asia, international relations/Europe.

The curricular options and requirements of these tracks are described in the *International Relations Major Handbook*, available in 214 Social Sciences.

All tracks require IntR 3101, one upper division social sciences quantitative methods course, and completion of a major project. The program requires students to demonstrate proficiency in a foreign language. Students who lack such proficiency must complete 3xxx-level coursework specified for the language selected. For some foreign languages the program offers courses on international relations taught in that language. These courses supplement the basic proficiency requirements in a foreign language and help students deepen their language skills in the subject matter of an international relations major.

In an era of computers and rapid transmission of data, the major also requires students to develop minimal quantitative skills with the successful completion of one upper division quantitative methods course.

An early start on planning your program in this major is essential. The requirements are diverse, and some courses may require you to complete a prior course in the same department. You are urged to begin the premajor courses as promptly as possible, including the foreign language requirements. You are also encouraged to complete your CLA general education requirements during your first two years. For early help in planning an international relations major, visit the program advisers in 248 Social Sciences.

Study Abroad—Students are encouraged to spend part of their undergraduate career studying at a foreign university. A variety of study abroad opportunities is available, and appropriate courses taken under such programs can be applied toward international relations major requirements. Students with interests in development and policy are par-

ticularly encouraged to consider an internship through the MSID program. Students are also encouraged to consider a Foreign Studies Minor, listed in this bulletin under Foreign Study.

B.A. Major Sequence

Students must complete a set of premajor requirements. With the successful completion of those requirements and formal enrollment in the major at the IntR advising office (248 Social Sciences), students are admitted to the major program.

Premajor requirements for admission to the major—To be accepted into the major, students must complete the following: Econ 1101-1102; 12 cr in other social science courses relevant to international relations; three quarters of second-language study (or equivalent as determined by the relevant language department). The GPA of these courses must be 2.75 or better, with no grade lower than C.

Admission to the major—Students who have completed the premajor requirements enroll in the major at the undergraduate advising office at 248 Social Sciences. The student and an adviser discuss the various tracks and develop a program that meets the major guidelines listed in the handbook. Students with questions about the premajor or major requirements or the various tracks are encouraged to contact the International Relations advisers.

Major Requirements—48 upper division credits (3xxx or 5xxx courses), including IntR 3101, and upper division quantitative methods course in social sciences, and an additional 8-15 credits at the upper division level in a foreign language. Each of the six programs or tracks of this major have a specific set of requirements listed in the handbook, which is available in 214 Social Sciences. Each of the 48 credits must carry a grade of C or better, and no course may be taken S-N (except Speech 5452, which is offered only S-N). The major requires completion of a major project, preferably IntR 3981.

Honors Program—Outstanding premajor students should consider the honors program, described in the International Relations Honors brochure available in 214 Social Sciences. Admission to honors in the international relations major requires an overall GPA of 3.30 or better, a GPA of 3.30 or better in foreign language courses, a GPA of 3.00 or better in economics courses, and a GPA of 3.50 or better in social science courses. The honors program provides seminars and supports a more ambitious major project than is required of other students. Interested students should contact the honors adviser in 235 Social Sciences.

Courses—Most courses in the international relations major are drawn from the College of Liberal Arts. The Environmental Track includes elective courses in the Institute of Technology and the College of Agriculture as well as in the College of Liberal Arts. For details consult the *International Relations Major Handbook*. The courses offered by the international relations programs are:

3101f. THEORETICAL APPROACHES TO INTERNATIONAL RELATIONS. (4 cr; prereq international relations major or #)

Interdisciplinary study of international relations; contributions of various disciplines to the analysis of significant contemporary world problems.

3101Hf. HONORS COURSE: THEORETICAL APPROACHES TO INTERNATIONAL RELATIONS.

(4 cr; prereq honors international relations major or #)

3610. FOREIGN LANGUAGE SUPPLEMENT.

(1-2 cr; prereq international relations major or #; must have satisfied the college language requirement in the language of the course)

Offered as a foreign language adjunct to English language courses on various topics. Languages vary.

3620. FOREIGN LANGUAGE NEWS COVERAGE OF INTERNATIONAL EVENTS. (2 cr; prereq international relations major or #; must have satisfied the college language requirement in the language of the course; limited to 15 students)

Compares coverage of current news in selected foreign language newspapers with coverage in a U.S. paper, such as *The New York Times*.

3640. FOREIGN LANGUAGE TEXTBOOKS ON INTERNATIONAL RELATIONS. (4 cr; prereq international relations major or #; must have satisfied college language requirements in the language of the course)

Examines textbooks used in the teaching of international relations in universities of the specified foreign language. Intended to provoke consideration of relationships of these books to the presentation and conceptualization of international relations found in prior course taken as part of major.

3660. NON-ENGLISH COURSE ON INTERNATIONAL RELATIONS TOPICS. (4 cr; prereq international relations major or #; must have satisfied the college language requirement in the language of the course)

Selected topics of international relations in a non-English literature. Enhances foreign language skills and awareness of foreign perspectives on international issues. Topics and languages vary.

3900. TOPICS IN INTERNATIONAL RELATIONS. (1-4 cr; prereq 12 cr in social sciences)

Selected issues and topics in international relations. Topics vary quarterly.

3960f, w, s. FIELD STUDIES/INTERNSHIP IN INTERNATIONAL RELATIONS. (1-8 cr [8 cr max]; prereq #, Δ) Staff

Internship with government/community/international organization or field study in international relations. Activities must have an international focus.

3970f, w, s. DIRECTED STUDIES. (1-15 cr per qtr; prereq #, Δ) Staff

Guided individual reading or study.

3981. MAJOR PROJECT. (4 cr; prereq international relations major, sr or #; limited to 15 students)

Supports senior project requirement by allowing students to formulate their own research questions, select a topic, develop and produce a 25-30 page undergraduate research paper.

3990Hf, w, s. HONORS COURSE: SUPERVISED RESEARCH PAPER. (3 cr; prereq sr honors candidate in international relations, Δ)

3991Hs. JUNIOR RESEARCH SEMINAR: INTRODUCTION TO RESEARCH IN THE SOCIAL SCIENCES. (3 cr; prereq jr honors international relations major)

Theoretical perspectives and methods available to researchers in international studies.

5701. THEORIES OF INTERNATIONAL DEVELOPMENT. (4 cr; prereq international relations major or #)

Interdisciplinary approaches to understanding contemporary development theory and practice. Selected development perspectives and case studies that illustrate complexities of development planning and implementation.

Major Requirements and Course Descriptions

5900. TOPICS IN INTERNATIONAL RELATIONS.

(4 cr; prereq international relations major or #)
Proseminar. Selected issues in international relations.
Topics vary quarterly.

5910. TOPICS IN INTERNATIONAL POLICY ANALYSIS.

(4 cr; prereq international relations major or #)
Proseminar. Synthesis of analytic approaches to international policy problems. Topics vary quarterly.

5930. TOPICS IN INTERNATIONAL DEVELOPMENT.

(4 cr)
Proseminar. Selected issues in international development. Students study more narrowly defined topics in the development area within a seminar setting. Topics vary quarterly.

Italian

See French and Italian.

Japanese

See Institute of Languages and Literatures.

Jewish Studies (JwSt)

Staff—Director, Tzvee Zahavy (Classical and Near Eastern Studies), 316 Folwell Hall

Professors: Bachrach (History), Berman (History), Cooperman (Sociology), Krislov (Political Science), Zahavy (Classical and Near Eastern Studies), Zipes (German)

Associate Professors: Paradise (Classical and Near Eastern Studies), Prell (Anthropology), Reisman (Classical and Near Eastern Studies), Sellow (Classical and Near Eastern Studies)

A major program is offered in Jewish Studies. For related coursework and major programs in Ancient Near Eastern Studies and Hebrew language and literature, see listings under Department of Classical and Near Eastern Studies. Study abroad in Israel or Europe may be a valuable part of these majors; see Foreign Study.

B.A. Major Sequence

Major Requirements—Hebr 1101-1102-1103, 3011-3012-3013; JwSt 3034

36 cr in courses at 3xxx level or above in Jewish languages and literatures, social sciences, and philosophy and religion, chosen with adviser approval

1034. INTRODUCTION TO JUDAISM.

(4 cr, §3034, §RelS 1034, §RelS 3034)
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.

3034. INTRODUCTION TO JUDAISM.

(4 cr, §1034, §RelS 1034, §RelS 3024)
Meets with 1034. Additional written assignments and reading.

3100. JUDAISM IN THE TIME OF EARLY CHRISTIANITY.

(4 cr, §RelS 3100)
History, religion, and literature of Judaism in Palestine, the Roman world, and Parthian and Sassanian Babylonia in the 2nd through 7th centuries. Methods for reconstructing the history of a religion from primary sources and evidence.

3115. MISHNAH AND MIDRASH IN TRANSLATION.

(4 cr, §RelS 3115)
Rabbinic writings in their original contexts and as living texts for the present. Interpretations of the Bible by early rabbis that address moral, theological, and literary problems. Jewish laws as a mirror of human culture. Knowledge of Hebrew not required.

3126. MODERN JUDAISM.

(4 cr, §RelS 3126)
Jewish theology, religion, and ideology in the 19th and 20th centuries. American Judaism: orthodox, conservative, reform; religious and communal organizational structures. Zionism in Europe and America. Hasidism.

3315. CONTEMPORARY ISRAELI LITERATURE IN TRANSLATION.

(4 cr)
Modern short stories and poetry. Works of Agnon, Yizhar, Hazaz, Yehoshua, Greenberg, Amihai, Pagis, others. Alienation, crisis of faith, war, genocide, freedom.

3521. THE HOLOCAUST.

(4 cr)
Nazi destruction of Jewish life in Europe, 1933-1945. 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.

Hist 3607. HISTORY OF THE JEWS IN MEDIEVAL EUROPE.

(4 cr)
Institutions, thought, and major personalities of the Jewish people from the later Roman Empire until the expulsions from Western Europe.

Hist 3775. HISTORY OF THE EUROPEAN JEWS FROM THE MIDDLE AGES TO THE PRESENT.

(4 cr; offered 1992-93 and alt yrs) Rudolph
Social, economic, and cultural history of the Jewish people in Europe and their interaction with other peoples; history and causes of anti-Semitism; Zionism and assimilation; Hasidism and socialism.

Hist 3867. AMERICAN JEWISH HISTORY. (4 cr; offered 1993-94 and alt yrs) Berman
Jews in the United States from the colonial period to the present; migration patterns, economic adjustment, social arrangements, political participation, cultural and religious diversity. Intergroup contacts, anti-Semitism, and formation of voluntary communal associations viewed in context of American historical experience.

Clas 5089. INTRODUCTION TO BIBLICAL ARCHAEOLOGY. (4 cr, §ReIS 5089)
Archaeological data relevant to the Jewish scriptures and the New Testament; major sites in the Holy Land and in other areas of the Mediterranean and the Near East. The evidence of pottery, inscriptions, manuscripts, and coins. Excavation methods. Archaeology as a tool for study of ancient religions. Requires additional work for graduate credit.

5900. TOPICS IN JEWISH STUDIES. (4 cr per qtr)
Historical, religious, sociological, anthropological, and humanistic study of Judaism and the Jewish people. Approach and method of study varies with topic.

5970. DIRECTED READINGS. (1-12 cr per qtr [12 cr max]; prereq #)
Guided individual reading or study.

Journalism and Mass Communication (Jour)

Staff—Director, Daniel Wackman, 111 Murphy Hall; *Director of Undergraduate Studies,* Albert Tims, 431 Murphy Hall; *Director of Graduate Studies,* Dona Schwartz, 106 Murphy Hall; *Assistant to the Director,* Linda Wilson, 111 Murphy Hall; *Silha Professor for Study of Media Ethics and Law,* Donald Gillmor, 34 Murphy Hall; *Mithum Chair of Advertising,* William Wells, 432 Murphy Hall; *Coordinator of Advising, Placement, and Internships,* Linda Lindholm, 15 Murphy Hall

Professors Emeriti: Carter, Emery, Gerald, Hage, Harris, Jones, Lindsay, Nixon, Thompson, Wilson

Professors: Dicken-Garcia, Fang, Gillmor, Lee, Soley, Tichenor, Wackman, Ward

Associate Professors: Babcock, Busterna, Faber, Hansen, Roberts, Schwartz, Tims

Assistant Professors: Chang, Griffin, Johnson

Study in the School of Journalism and Mass Communication is concerned with the theories and practices of mass communication, histori-

cal and contemporary, and, for those who choose, the development of skills and techniques necessary for the successful practice of written, oral, and visual communications.

The school offers a B.A. major program with two different tracks, professional and mass communication. The professional track prepares students for careers in journalism, public relations, and advertising. Among these careers are newspaper reporting and editing, magazine writing, broadcast news, news photography, corporate public relations, advertising copywriting, and account executive positions. The professional track is based on a broad liberal arts foundation, knowledge of the social and professional responsibilities of communicators, and basic competence in journalistic skills.

The mass communication track is for students who wish to study the economic, political, legal, and social aspects of mass communication. Students may wish to develop a program emphasis in areas such as history, law, media effects, media industry studies, international communications, or other aspects of mass communication studies represented in the school.

About three-fourths of the coursework for the B.A. degree is outside of journalism in the social sciences, humanities, and other liberal arts. In addition to University requirements, a minimum of 131 non-journalism credits, including 94 CLA credits, must be completed in a 180-credit degree program.

General Education—Journalism and Mass Communication preparatory course 1001 and selected enrichment courses (Group II) are open to nonmajors.

Study Abroad—Journalism and Mass Communication students are strongly encouraged to incorporate one or more overseas study experiences into their academic program. For the most part, such study should be in the liberal arts, which would contribute to the professional journalism program here. With the approval of an adviser, it is possible to carry out independent study for journalism credit. For information on options and procedures, see Foreign Study.

B.A. Major Sequence

Admission—The school admits a limited number of undergraduate students annually. A formal intention to major in journalism (professional or mass communication track) should be filed in the Undergraduate Studies Center, 15 Murphy Hall, before enrolling in 3003. A student should apply for formal admission to the major after completing Jour 1001 and completing or enrolling in 3003, completing or enrolling in three of the supporting courses on an A-F grading basis, taking the College Entrance Examination Board English composition test, passing a keyboarding test administered by the school, and acquiring at least 60 CLA credits. Admission to major status is required before enrolling in Jour 3004, which is a prerequisite for all other core, enrichment, and professional journalism courses.

Students wishing to emphasize journalism in IDIM, BIS, and ICP must have a 2.80 overall GPA, 2.50 GPA in Jour 1001 and 3003, and score 500 or above on the CEEB exam in order to qualify for admission. A 2.80 overall GPA is required for students in the Program in Individualized Learning who wish to include journalism courses in their programs. Individualized program students may include no more than two professional courses in their programs.

Specializing within the Major—A specialized program may be planned in consultation with an adviser. Primary areas are reporting and editing, advertising, broadcast journalism, visual communications, and public relations; examples of specialties are public affairs journalism, international communication, community newspaper management, graphic arts, communications research, photojournalism, and magazine writing and editing.

Supporting Coursework—Econ 1101-1102; Pol 1001; Hist 1301-1302 or 3821-3822 or 3822-3823; for professional students whose primary interest area is advertising or public relations and for mass communication students, Psy 1001; for professional students whose primary interest area is broadcast

journalism or public relations, Spch 1101. *Note:* Supporting course requirements are under review and may be modified during the 1992-93 academic year.

Completion of freshman composition requirement (or exemption) and two additional composition courses certified by the school, one of which must be taken at the 3xxx level.

Required Preparatory Courses—Jour 1001, 3003

Required Core Courses—3004 with a grade of C or higher, two from 3006, 3007, 3008

Requirements for Professional Track—Five professional courses, including one course with a grade of C or higher from Group I-A (below) and one course from Group I-C; two enrichment courses from Group II. A minimum of 16 credits must be completed in 5xxx-level journalism courses.

Requirements for Mass Communication Track—Seven enrichment courses from Group II. Two professional courses may be substituted for enrichment courses in Group II with faculty adviser approval. A minimum of 16 credits must be completed in 5xxx-level journalism courses.

Major Project—All journalism majors are required to complete a major project before graduation. For details about project options, contact the Undergraduate Studies Center.

Minor Requirements—1001, 3003, 3004, 3006 or 3007 or 3008; two enrichment courses, one of which must be at the 5xxx level.

Students must have a 2.80 overall GPA, 2.50 GPA in Jour 1001 and 3003 and score 500 or above on the CEEB exam in order to qualify for admission to the minor program.

Preregistration—Before the start of formal CLA registration for fall, winter, and spring quarters, and for summer sessions, the school has a preregistration period for admission into most courses. They are identified as "controlled courses," meaning that enrollment is limited to majors only.

For more information about pre-registration, consult the Undergraduate Studies Center, 15 Murphy Hall.

Preparatory Courses

1001. INTRODUCTION TO MASS COMMUNICATION. (4 cr)

Nature, functions, and responsibilities of communication media and agencies from professional point of view. News, opinion, entertainment, and persuasion functions; current trends. Specialized communication; aspects of advertising.

3003 (formerly 1003). PRODUCING MASS MEDIA MESSAGES. (4 cr; prereq formal pre-jour program filed, 1001, fr composition or exemption, Δ)

Analysis of mass media messages; practice in writing factual and persuasive messages. Message attributes, style, structure, formula, constraints, techniques, and conventions. Applications to news, advertising, documentary, and interpretive writing for print, film, and video. Typed assignments required.

Core Courses

3004 (formerly 1004). INFORMATION FOR MASS COMMUNICATION. (4 cr; prereq jour major or minor, 3003, Δ)

Information resources for professional and academic work in mass communication; techniques for locating, retrieving, appraising, and verifying information acquired from public records, libraries, research institutions, databases, and interviews.

3006 (formerly 1002). VISUAL COMMUNICATION. (4 cr; prereq jour major or minor, 3004 or concurrent, Δ)

Form, content, and meaning in visual communication. Basic visual elements and techniques. Issues in perception, picture use, and the sources of visual conventions. Organization and production of visual media. Applications to photography, film, television, advertising, and documentary work.

3007. THE MEDIA IN AMERICAN HISTORY AND LAW: CASE STUDIES. (4 cr; prereq jour major or minor, 3004 or concurrent, Δ)

Using a case study approach focusing on legal and ethical issues, examines the media in the socioeconomic-political-technological context of a specific historical period.

3008. MASS COMMUNICATION PROCESSES AND STRUCTURE. (4 cr; prereq jour major or minor, 3004 or concurrent, Δ)

Communication theories as they relate to mass communication processes; major structural aspects of mass communication systems as they affect mass communication processes.

I. Professional

Group A

3101. REPORTING. (4 cr; prereq jour major, 3004; grad students must pass 30 wpm, Δ)

Fact gathering and journalistic writing. Problems in judgment and handling of news and news features.

3201. PRINCIPLES OF ADVERTISING. (4 cr; prereq jour major or minor, 3004, Δ)

Theory, principles, and functions of advertising; its role in economic, social, and marketing structure. Newspapers, magazines, radio, television as advertising media.

3301. BASIC PHOTOGRAPHIC COMMUNICATION. (4 cr; prereq jour major, 3004, Δ)

Photography as creative communication. Fundamentals of photography; use of news cameras; darkroom processes. Film and processing expenses.

Group B

3121. PUBLIC AFFAIRS REPORTING. (4 cr; prereq jour major, 3004, 3101; grads must pass 30 wpm keyboard test, Δ)

Reporting and editing news of courts and municipal, county, state, and federal administrative and legislative agencies.

3155. PUBLICATIONS EDITING. (4 cr; prereq jour major, 3004, 3101, Δ)

Selection and editing of news-editorial content of newspapers, brochures, magazines. Newspaper makeup, magazine format. Press association teletype service. Lecture and laboratory.

3159. PUBLIC RELATIONS. (4 cr; prereq jour major, 3004, 3101 or 3201, Δ; offered through Extension)

History and development of public relations practice and principles. Process and applications in a variety of institutional settings. Analysis and critique of public relations in contemporary society.

3173. MAGAZINE WRITING. (4 cr; prereq jour major, 3004, 3101, Δ)

Writing feature articles for general, class, and trade publications; study of market free-lance methods.

3193. COMMUNITY NEWSPAPER. (4 cr; prereq jour major, 3004, Δ)

The community newspaper (weekly and small daily) as an editorial product and a business. Aspects of news, opinion, advertising, production. Role of the editor in the community.

3241. ADVERTISING COPYWRITING. (4 cr; prereq jour major, 3004, 3201, Δ)

Advertising appeals and strategy; advertising for print and broadcast. Individual and group projects.

Major Requirements and Course Descriptions

3321. BASIC MEDIA GRAPHICS. (4 cr; prereq jour major, 3004, Δ)

Basic introduction to mass media graphics, including design principles and history, production technology, typographic legibility research, analysis of printing and production costs.

3451. TELEVISION AND RADIO NEWS. (4 cr; prereq jour major, 3004, 3101, Δ; lect plus lab and news production hrs)

Writing, interviewing, delivery, audiotape editing, graphics preparation. Production of radio newscasts and a radio documentary.

5182. SUPERVISION OF SCHOOL PUBLICATIONS. (4 cr; prereq jour major, 3004, Δ or #; Δ for nonmajors)

Emphasis on editorial content, staff organization, editing, typography, makeup, business management for those who plan to advise high school or college newspapers, yearbooks, magazines.

Group C

5131. INTERPRETIVE REPORTING. (4 cr; prereq jour major, 3004, 3121 or 3173 or 5155, Δ)

Advanced problems in reporting about government, politics, social problems, and the arts.

5133. INTERPRETIVE REPORTING ABOUT SCIENCE. (4 cr; prereq jour major, 3004, 3121 or #, Δ)

Role of journalistic communication in science; scientist-journalist relationships; communicating results of scientific investigations to public, specialized audiences, industry.

5141. OPINION WRITING IN AMERICA. (4 cr; prereq jour major, 3004, #, one 3xxx-level writing course, Δ)

Oral and written analysis of major political, economic, social developments. Persuasive communication in newspapers and magazines; columnists; commentators.

5155. ADVANCED REPORTING METHODS. (4 cr; prereq jour major, 3004, 3101, Δ)

Investigative techniques for the mass media, including quantitative research methods, use of records and documents, analysis of statistics, advanced interviewing, and methods for adverse conditions.

5159. CASE STUDIES IN PUBLIC RELATIONS.

(4 cr; prereq jour major, 3004, 3159, Δ; offered through Extension)

Case study approach to application of public relations principles to solution of problems in business, government, education, and community. Designed to enable students to sharpen their perceptions, insights, and judgments in examining practical and ethical questions.

5170. ARTS AND ENTERTAINMENT REPORTING. (4 cr; prereq jour major, 3004, 3101, Δ or #; 3004, 3101, Δ for nonmajors)

News and feature writing about arts and entertainment industry. Assignments follow Twin Cities arts/entertainment news emphasizing campus events. Weekly writing assignments, readings, guest lectures from local artists and journalists.

5171. ARTS REVIEWING. (4 cr; prereq jour major, 3004, 3101, Δ or #; 3004, 3101, Δ for professional writers, reporters, majors in performing and studio arts; offered through Extension)

Book, theatre, visual media reviews. Analysis of leading critics and critical periodicals. Weekly reviews.

5174. MAGAZINE EDITING AND PRODUCTION. (4 cr; prereq jour major, 3004, 3173 or 3321 or 5302, #, Δ)

Writing, editing, illustration, design, layout, photocomposition of a single-issue magazine.

5233. GRAPHIC DESIGN ANALYSIS. (4 cr; prereq jour major, 3004, 3321, Δ)

Analysis and practice of graphic design and layout for print media; historical and current trends; advanced projects.

5261. ADVERTISING: MEDIA ANALYSIS. (4 cr; prereq jour major, 3004, 3201 or #, Δ)

Print and electronic media, their role in advertising; selection and scheduling; rate structures and policies; evaluation and use of media and market measurements and data.

5263. ADVERTISING CAMPAIGN PLANNING.

(4 cr; prereq jour major, 3004, 5261, Mktg 3000 or #, Δ)

The development of campaign strategy and tactics. Emphasis on planning and decision-making skills needed to design effective advertising campaigns.

5272. ADVANCED ADVERTISING COPYWRITING. (4 cr; prereq jour major, 3004, 3241, Δ)

Advanced work in formulating creative strategy and writing advertising copy for print and broadcast media for various kinds of advertisers.

5302. ADVANCED PHOTOGRAPHIC COMMUNICATION. (4 cr; prereq jour major, 3004, 3301 or #, Δ)

Comparison of codes in photographic communication. Producing photographs for a variety of publication contexts. Examination of the role of important photographs in journalism and mass communication. Field trips and guest lecturers. (Film, processing expenses.)

5303. PROJECTS IN PHOTOGRAPHIC COMMUNICATION. (4 cr; prereq jour major, 3004, 5302 or #, Δ)

Advanced projects in documentary photography; structuring visual narratives. Comparison of exhibition/publication formats, history, ideology approaches to documentary photography. (Film, processing expenses.)

5441. ELECTRONIC NEWSGATHERING. (4 cr; prereq jour major, 3004, 3451 or 5302, Δ; lect plus lab and news production hrs)

Modern television news gathering. Demonstrations and field exercises in planning, lighting, shooting, editing, and scripting typical broadcast news assignments.

5442. ADVANCED TELEVISION NEWS. (4 cr; prereq jour major, 3004, 3451, Δ; lect plus lab and news production hrs)

Preparation and delivery of television newscasts. The industry's current problems; legal and ethical considerations. Social impact of electronic journalism.

5444. TELEVISION AND RADIO DOCUMENTARY.

(4 cr; prereq jour major, 3004, 3451 or 5174 or 5302, Δ; lect and news production hrs, field and lab hrs as needed)

Scope and techniques. Production of television or radio news documentaries of broadcast quality.

II. Enrichment

3614. HISTORY OF MASS COMMUNICATION TECHNOLOGY. (4 cr; if you have not been officially admitted to a jour program, you may not apply this toward the major or minor)

History of communication technology, with emphasis on mass communication, from earliest times to the present. The impact of new technologies on society.

3741. RACIAL MINORITIES AND THE MASS MEDIA. (4 cr; if you have not been officially admitted to a jour program, you may not apply this toward the major or minor)

Racial minority groups in United States as producers, subjects, and consumers of mass media. Twentieth-century developments, including the media reform movement that started with the campaign against *Birth of a Nation*.

3745. MASS MEDIA AND POPULAR CULTURE.

(4 cr; if you have not been officially admitted to a jour program, you may not apply this toward the major or minor)

Mass media's role in the formation of popular culture and cultural discourse. Traditional debate over "mass culture"; mass media representations, ethnicity, religion, social status, and gender. Prevalent media metaphors, caricatures, and stereotypes. Social and commercial pressures influencing media representation.

3776. MASS COMMUNICATION LAW. (4 cr; prereq jour major or minor, 3004, Δ)

Brief historical background, First Amendment rights, basic law of defamation, free press and fair trial, access to news, access to press, privacy, contempt, obscenity, regulation of broadcasting and advertising, antitrust controls, legal and ethical rules affecting journalistic practice.

3796. MASS MEDIA AND POLITICS. (4 cr; prereq 1001 or Pol 1001 or #; if you have not been officially admitted to a jour program, you may not apply this toward the major or minor)

Analysis of role of mass media in politics; emphasis on television and electoral campaigns; news coverage vs. newsmaking. Free press in democracy.

5221. PUBLICATION GRAPHICS. (4 cr; prereq jour major or minor, 3004, 8 cr in 3xxx or 5xxx courses in art and design or #, Δ; offered through Extension)

Role of printing processes in graphic communication. Technique and production of illustrations. Significant developments in graphic arts technology.

5251. PSYCHOLOGY OF ADVERTISING. (4 cr; prereq jour major or minor, 3004, Psy 1001, Δ)

Psychological principles, research techniques, and applications in advertising and selling. Consumer attitudes and behavior. Psychological mechanisms upon which effectiveness of advertisements and commercials depend.

5274. ADVERTISING IN SOCIETY. (4 cr; prereq jour major or minor, 3004, sr, Δ)

Advertising as an institution. Social and economic criticism of advertising. Ethics in advertising. Advertising regulation and self-regulation.

5316. THEORIES OF VISUAL COMMUNICATION.

(4 cr; prereq jour major or minor, 3004, 3006 or #, Δ)

Perspectives on the study and analysis of visual communication; contributions from sociology, anthropology, psychology, and history. Message structure, systems of production, and use of visual media.

5501. COMMUNICATION AND PUBLIC OPINION I.

(4 cr; prereq jour major or minor, 3004, Δ)

Theories of the communication process and of persuasion and attitude change. Functions of interpersonal and mediated communication in diffusion of information and in opinion formation.

5531. COMMUNICATION AND PUBLIC OPINION II.

(4 cr; prereq jour major or minor, 3004, 5501 or Soc 5355, Δ)

Advanced study of theories and research findings on opinion formation, persuasion, diffusion of information. Social science contributions to studies of the process and effects of mass communication.

5541. MASS COMMUNICATION AND PUBLIC HEALTH.

(3 cr, \$PubH 5394; prereq jour major or minor or grad, 12 cr social or behavioral sciences, 3004, #, Δ; 12 cr social or behavioral sciences, 3004, Δ for MPH and MS in epidemiology students)

Role, functions, and effects of mass media on public health; planned and unplanned effects; review and analysis of literature to understand how theories, models, and assumptions of mass communication research relate to public health.

Major Requirements and Course Descriptions

5601. HISTORY OF JOURNALISM. (4 cr; prereq jour major or minor, 3004, Δ)

Development of American newspapers and periodicals from beginnings in Europe to present day; rise of radio and television; relation of communications developments to political, economic, and social trends.

5606. LITERARY ASPECTS OF JOURNALISM.

(4 cr; prereq jour major or minor, 3004, #, Δ)
Literary aspects of journalism as exemplified in, and influenced by, works of English and American writers, past and present. Lectures, discussions, and weekly papers.

5611. DEVELOPMENT OF AMERICAN BROADCASTING.

(4 cr; prereq jour major or minor, 3004, Δ)
Historical and economic development of radio and television in United States; government regulation, industry self-regulation, forms of social control; issues in contemporary broadcasting; the journalist as broadcaster.

5615. HISTORY OF VISUAL COMMUNICATION IN THE MASS MEDIA. (4 cr; prereq jour major or minor, 3004, Δ)

Social history of photography, film, and video. Informational, documentary, and entertainment functions of visual communication. Organizational structures, visual styles, and audiences.

5721. MASS MEDIA AND U.S. SOCIETY. (4 cr; prereq jour major or minor, 3004, Comp 3027 or #, Δ)
Economic, political, and social determinants of character and content of mass communication in U.S. structure, functioning of mass media. Problems, prospects, and criticism. Professionalism, technology, reform.

5725. THE MANAGEMENT OF MEDIA ORGANIZATIONS. (4 cr; prereq jour major or minor, 3004, Δ)
Examination and analysis of media organizations as businesses; economics of the mass media; markets, finances, organizational structure and management practices of principal media industries; issues in media management.

5726. CASE STUDIES IN MODERN MEDIA MANAGEMENT. (4 cr; prereq jour major or minor, 3004, Δ; #, Δ for nonmajors; 5725 recommended)
Case studies of how media managers make decisions dealing with money, marketing, product, personnel, and production information. Examination of the interaction between quality, price, service, and the limits of technology.

5728. NEWS MEDIA ECONOMICS. (4 cr; prereq jour major or minor, 3004, Δ)
Political economy of news media with emphasis on United States. Effect of media ownership, competition, and advertising on the content and economic performance of news media outlets.

5731. COMMUNICATIONS PROBLEMS AND ISSUES. (4 cr; prereq sr, jour major or minor, 3004 or #, Δ)

Individual project and topical seminar of major contemporary problems and issues of communication.

5731H. HONORS COURSE: COMMUNICATIONS PROBLEMS AND ISSUES. (4 cr; prereq sr, jour major or minor, 3004, #, Δ; honors div regis)

Individual project and seminar of major contemporary problems and issues of communication.

5741. MINORITIES AND MASS MEDIA. (4 cr; prereq jour major or minor, 3004, 3007 or 3008 or #, Δ)
Analysis of relationships between mass media and communities of color in United States. Focusing on issues of content and control.

5777. CONTEMPORARY PROBLEMS IN FREEDOM OF SPEECH AND PRESS. (4 cr; prereq jour major or minor, 3004, Δ)

Legal and constitutional derivation of freedom of speech and press, with emphasis on case law, judicial theories, doctrines, tests, and values. Symbolic, commercial, and compelled speech, speech plus, petition and assembly, leading press cases, legal research techniques.

5801. INTERNATIONAL COMMUNICATION.

(4 cr; prereq jour major or minor, 3004, Δ)
Structures, processes, and consequences of international mass communication. Problems in free flow of information. Roles of international organizations, journalism. Mass communication in social, political, economic development; implications for conflict resolution.

5825. WORLD COMMUNICATION SYSTEMS.

(4 cr; prereq jour major or minor, 3004, Δ)
Mass media systems of the world, described and analyzed regionally and nationally; historical roots; social, economic, and cultural context; contemporary conditions and prospects; and relevance of journalism and mass communication to international affairs.

III. Independent Study

3970. DIRECTED STUDIES. (1-4 cr per qtr [8 cr max]; prereq jour major or minor, 3004, #, Δ, □)
Independent study; projects.

3980. DIRECTED INSTRUCTION. (2 cr max; prereq major, adviser approval, one professional course for professional majors, one adviser approved course for mass comm majors, Δ)
Internship at graduate or undergraduate level supervised by communications organization at which the student is working and by student's academic sponsor.

5970. ADVANCED PROJECTS IN JOURNALISM.

(1-4 cr per qtr [8 cr max]; prereq jour major or minor, 3004, B avg, #, Δ)
Independent study; projects.

5970H. HONORS COURSE: ADVANCED PROJECTS IN JOURNALISM. (1-4 cr per qtr [8 cr max]; prereq jour major or minor, 3004, B avg, #, Δ, □, honors registration)
Independent study; projects.

5990. SPECIAL TOPICS IN MASS COMMUNICATION. (1-4 cr per qtr [8 cr max]; prereq jour major or minor, 3004, #, Δ)
Topics announced in *Class Schedule*.

Latin

See Classical and Near Eastern Studies.

Learning and Academic Skills

Department of Psychology

LASK 1001. BECOMING A MASTER STUDENT. (2 cr; may not be applied toward any CLA degree)
Practical assistance in developing efficient study and concentration methods, preparing for examinations, and improving reading skill. Student attitudes and motivations and their relation to satisfactory performance.

Linguistics

See Institute of Languages and Literatures, General and Applied Linguistics.

Carlson School of Management

Courses appearing in the *CLA Bulletin* are approved for CLA credit. However, CLA students may take up to 28 credits of coursework offered by other colleges. The credits may be applied toward CLA degrees, and in some cases may be used to fulfill general education requirements. Consult your college office adviser for a list of courses from other colleges approved for general education requirements.

Descriptions of courses offered by the Carlson School of Management can be found in the bulletin of that college.

Information about requirements for entering the Carlson School of Management can be found in the third section of this bulletin.

Marathi

See Institute of Languages and Literatures.

Mathematics (Math)

Institute of Technology

Staff—Head, Eugene Fabes, 127 Vincent Hall; **Associate Head,** Naresh Jain, 127 Vincent Hall; **Director of Undergraduate Studies,** Stephen Agard, 4 Vincent Hall; **Director of Graduate Studies,** 127 Vincent Hall

Regents' Professors: Markus, Serrin

Professors: Aeppli, Agard, Anderson, Aronson, Baxter, Berger, Eagon, Edelman, Ellis, Fabes, Feshbach, Friedman, Fristedt, Garrett, Gil de Lamadrid, Goldman, Gray, Green, Gulliver, Harris, Hejhal, Jain, Jodeit, Joichi, Kahn, Keynes, Kinderlehrer, Krylov, Littman, Loud, Luskin, Marden, McCarthy, McGehee, Messing, Meyers, Miller, Moeckel, Ni, Nitsche, Olver, Pour-El, Prikry, Pruitt, Reich, Rejto, Richards, Roberts, Safonov, Sattinger, Sell, Sibuya, Sperber, Stanton, Storvick, Sverak, Webb, Weinberger, White

Associate Professors: Brauer, Chow, Cockburn, Conn, Frank, Fuhrken, L. Gaal, Gershenson, Harper, Jenkins, Miracle, Richter, Striebel

Assistant Professors: Adams, Daskalopoulos, Kichenassamy, Kumabe, Niziol, Rosenthal, Sullivan

General Education—The mathematics curriculum for the major begins with calculus (1251 or 1551H). However, the School of Mathematics offers “introductory” courses at a level below calculus. These courses include 1001 (Excursions in Mathematics), 1031 (College Algebra and Probability), and the pair 1051-1151 (Precalculus I-II). If you are considering one of these introductory courses, you must determine both the direction you wish to take in math and the appropriate level of entry.

The possible directions are Finite Mathematics (1131), Short Calculus (1142), or Full Calculus (1251). The choice of direction is sometimes clarified by the requirements of your prospective major. If your direction is toward Finite Math or Short Calculus, then 1031 is the appropriate intro-

Major Requirements and Course Descriptions

ductory course. If your direction is toward Full Calculus, then 1051-1151 is appropriate. Introductory courses are not required if your background and placement scores indicate otherwise. If you wish to change your direction after taking one of the introductory courses you may do so by taking one of the special 2-credit courses 1038 or 1058.

To help determine the proper level of entry, you are required to take a mathematics placement exam. If you are a new student, information about this exam is included in your orientation materials. If you are not attending orientation, contact your college office for testing information. The exam may be taken in spring, summer, or just before the start of each quarter. The result of the exam may indicate a recommended entry level that is one of the "developmental" courses found in General College, one of the introductory courses of the School of Mathematics, or calculus itself.

ACT and SAT scores, high school grades, and AP scores are also taken into account in matters of placement. This is especially true if you expect college credit for, or exemption from, taking certain calculus courses. If you are entering CLA, you are expected to contact the CLA Premajor Advising Office. If not, contact your college office.

If you are coming from another institution and are seeking advanced placement, a careful reading of the calculus course descriptions of both schools is necessary. The general rule is that you are not required to take any University of Minnesota course for which the subject matter has been covered in course(s) taken elsewhere, and for which credit has been granted. Credits for such courses taken elsewhere are usually awarded as part of the admissions process. If you wish to appeal the credit awards, you must initiate that process in your college office. Mathematics advisers, available by appointment (4 Vincent Hall, 612/625-4848), do not make rulings about credits, but will assist you for the purpose of placement or appeal. You may be asked to show materials (college bulletin and/or textbook and/or syllabus) to expedite these processes.

Degrees—The School of Mathematics offers a program leading to the B.A. degree in the College of Liberal Arts and one leading to the bachelor of mathematics (B.Math.) degree in the Institute of Technology. Information about the B.Math. program may be found in the *Institute of Technology Bulletin*.

By fulfilling certain requirements beyond those for the B.A., you can earn the additional phrase "with Actuarial Specialization" or "with Specialization in Mathematics Education" on your diploma.

Honors—Information about honors courses and graduation with honors may be obtained in the undergraduate mathematics office in Vincent Hall.

B.A. Major Sequence

Lower Division Requirements—You are required to complete the seven courses, 1251-1252-1261-3251-3252-3261-3262. Honors students complete the six courses, 1551H-1552H-1553H-3551H-3552H-3541H. If you wish to take an honors course, you must be interviewed at the IT Honors office, 136 Lind Hall. An honors student who does not take 1552H at this University may be required to take 3262.

Upper Division Requirements—You are required to take a minimum of 10 approved upper division courses from this bulletin. There are also distribution requirements in the three categories of analysis, algebra, and depth, each of which is explained below.

A minimum of five courses is required in algebra and analysis (either 3-2 or 2-3). The depth requirement involves the selection of one or two "areas of specialization." If three courses are taken in both algebra and analysis, the depth requirement is waived. If a total of five courses are taken in algebra and analysis (combined), the depth requirement is either three courses in a single area of specialization or two courses in each of a pair of areas of specialization.

Courses that fulfill the analysis requirement are 5606-5607-5608 or 5612-5613-5614. Courses that fulfill the algebra

requirement are 5245-5246-5247 or 5282-5283-5284. In both categories, the second-named sequence is substantially deeper and intended primarily for students planning to go to graduate school.

The possible areas of specialization are as follows: logic (5162-5163-5164), geometry (5331-5332-5333), topology (5341-5342-5343), methods of applied mathematics (5457-5458-5459), numerical analysis (5473-5474-5475 or CSci 5301-5302-5304-5305-5306), ordinary differential equations (5521-5522-5523), partial differential equations (5571-5572-5573), probability (5681-5682-5683), statistics (Stat 5131-5132-5133), combinatorics/graph theory (5701-5702-5703), and actuarial mathematics (5056-5057-5058-5059). Other pairs or triples from the department offerings listed below may be substituted with adviser approval.

General Requirements—A math course numbered over 5000 is approved for the major unless otherwise stated in the course description. A limited number of approved courses outside the math department are listed above among the areas of specialization. No other courses outside the mathematics department may be substituted. The total number of credits required is 180. Courses in the major must be taken on an A-F basis and must be completed with a grade of C or better.

Actuarial Science Specialization—This specialization has requirements in addition to those of the basic math major.

Additional lower division requirements: a course in computer science, such as 3101 or 3102; Econ 1104-1105 or 1101-1102-3101; Acct 1050; BFin 3000; Ins 5100.

Additional upper division requirements: one of the 5xxx-level algebra courses taken must include *linear* algebra as a topic. The areas of specialization are to be statistics and actuarial mathematics, and a minimum of three courses in each category is required. The statistics requirement may be fulfilled by either Stat 5131-5132-5133 or by the combination of Stat 5121-5122 and

Math 5679. Variations not explicitly stated may be substituted with adviser approval.

Mathematics Education Specialization—This specialization has requirements in addition to those of the basic math major.

Additional lower division requirement: a course in computer programming. CSci 3102 is recommended.

Additional upper division depth requirements: there must be an area of specialization in geometry. Two additional courses must be chosen from the following list: Stat 5131-5132, Math 5209, 5679, 5681-5682, 5701-5702-5703. If a second area of specialization is required, the two courses selected from this list must be linked. No more than one of the following may be elected: Stat 5131, Math 5679, Math 5681. Any other required math elective is to be taken from the previous list or the following list: 5151, 5152, 5162-5163-5164, 5341-5342, 5473, 5568. Some of the total 180 credits required for this program may be taken in the College of Education.

Mathematics Minor—It is possible to obtain a minor in mathematics by completing the lower division requirements for the major, together with three of the 5xxx-level courses that are approved for the major. At least one of the 5xxx-level courses must be a prerequisite for one of the other two. At most one course in another department may be offered as part of a minor program. Courses in the minor must be taken on an A-F basis and completed with a grade of C or better.

Course Offerings—All prerequisites must be completed with a grade of C or better.

1001. EXCURSIONS IN MATHEMATICS. (4 cr; prereq 3 yrs high school math, placement exam or GC 0631 with a grade of C or better)
Topics indicating breadth of mathematics, its applications, and nature and power of abstract reasoning. Not a prerequisite for any other mathematics course.

1005. INTRODUCTION TO ELEMENTARY MATHEMATICS. (4 cr; prereq 1031 or equiv; may not be applied toward any CLA degree; pre-elementary education students only)
Progressions, financial mathematics, counting problems, probability theory.

Major Requirements and Course Descriptions

1006. INTRODUCTION TO ELEMENTARY

MATHEMATICS. (4 cr; prereq 1031 or equiv, pre-elementary education students only; may not be applied toward any CLA degree)

Elementary computer programming (BASIC); elements of statistics, graph theory, geometry, and number theory; number systems.

1008. TRIGONOMETRY. (4 cr, §1201, §1151; prereq plane geometry, 2 yrs high school algebra)

Analytic trigonometry, identities, equations, properties of the trigonometric functions; right and oblique triangles.

1031. COLLEGE ALGEBRA AND PROBABILITY.

(4 cr, §1051, §1111, §1151, §1201; prereq 3 yrs high school math, placement exam or GC 0631 with a grade of C or better)

Algebra and analytic geometry explored in greater depth than is usually done in three years of high school mathematics. Additional topics from combinations, permutations, and probability. A suitable prerequisite for 1131 or 1142, but not for 1251.

1038. COLLEGE ALGEBRA AND PROBABILITY

SUBMODULE. (2 cr, §1031, §1111; prereq 1051) Same as 1031, strictly for students who have taken Math 1051 and thus covered about one half of the material already. Prerequisite strictly enforced.

1051. PRECALCULUS I. (4 cr; §1031, §1111, §1201, §1008, §1151; prereq 3 yrs high school math, placement exam or GC 0631 with a grade of C or better) Algebra, analytic geometry, and trigonometry beyond the usual coverage found in a three-year high school mathematics program. First of two courses (see 1151). Prepares students for the full calculus sequence. Not an acceptable prerequisite for 1131.

1058. PRECALCULUS I SUBMODULE. (2 cr, §1051, §1151, §1111, §1201, §1008; prereq 1031) Same as 1051, strictly for students who have taken 1031 and thus covered about one half of the material already. Prerequisite strictly enforced.

1131. FINITE MATHEMATICS. (5 cr; prereq 3 yrs high school mathematics or a grade of C or better in 1031 or 1111; for students in prebusiness and social and behavioral sciences) Elementary computer programming, financial mathematics, probability, linear algebra, linear programming, Markov chains.

1142. SHORT CALCULUS. (5 cr, §1251; prereq 3 yrs high school mathematics or a grade of C or better in 1031 or 1111 or 1201; for students requiring a minimal amount of calculus) Derivatives, integrals, differential equations, maxima and minima, partial differentiation, applications.

1151. PRECALCULUS II. (4 cr, §1008, §1111, §1201; prereq 3½ yrs high school mathematics, placement exam or Math 1051 with a grade of C or better) Second of two courses (see 1051) in algebra, analytic geometry, and trigonometry. Prepares students for the full calculus sequence. Not an acceptable prerequisite for Math 1131.

1171-1181-1191. PRECALCULUS AND INTRODUCTION TO HIGHER-LEVEL MATHEMATICAL PATTERNS. (5 cr per qtr, §1051, §1151, §1201; no credit given for other sub-calculus courses except 1001; prereq plane geometry, 2 yrs high school algebra, Δ or plane geometry, C or better in GC 0631, Δ) For students intending to take calculus; provides stronger preparation than the combination of 1051 and 1151. Functions, graphs, inequalities, polynomials, trigonometry with emphasis on mathematical insight and applications to a variety of mathematical areas. Supervised group work in workshop sessions.

1251-1252. ONE-VARIABLE DIFFERENTIAL AND INTEGRAL CALCULUS I-II. (4 cr per course, §1451H-1452H, §1411H-1421H, §1211-1221; prereq 4 yrs high school math including trigonometry, placement test or a grade of C or better in Math 1151 or equiv; a grade of C or better in 1251 required for 1252) Calculus of functions of one variable and related geometry and applications.

1261. THE ALGEBRA AND GEOMETRY OF EUCLIDEAN SPACE. (4 cr, §1241, §3142, §1553H, §3511H; prereq 1211 or 1251) Vectors and their operations; matrices and matrix algebra, linear algebraic equations; Gaussian elimination; determinants and their applications; linear transformations; subspaces, quadratic functions, rigid motions, and orthogonal matrices.

1551H-1552H HONORS: ONE-VARIABLE DIFFERENTIAL AND INTEGRAL CALCULUS I-II. (4 cr per course, §1251-1252, §1411-1421, §1211-1221; prereq consent of IT Honors Office, a grade of C or better in 1551H required for 1552H) Honors-level treatment of calculus of functions of one variable and related geometry and applications, including infinite sequences and series.

1553H-3551H-3552H. HONORS: LINEAR AND NONLINEAR ANALYSIS I-II-III. (4 cr per course; parts of this sequence may not be taken for credit by students with previous 3xxx Math courses—adviser approval required; prereq 1251-1252 or 1551H-1552H or equiv; a grade of C or better required to continue in sequence) *1553H:* vector geometry and linear algebra; *3551H:* ordinary differential equations; *3551H-3552H:* multivariable differential calculus; *3552H:* multivariable integral calculus; recommend taking courses in consecutive quarters.

1711H-1721H-1731H. SECONDARY STUDENTS HONORS CALCULUS I-II-III. (4 cr per qtr; prereq #, Δ)

Accelerated honors sequence for selected mathematically talented high school students. Essentially the same as 1551H-1552H, plus applications to science and engineering. Emphasis on theory and computations. Students who complete 1731 take 3511H next.

3001. ACTUARIAL SCIENCE SEMINAR. (1 cr; prereq 48 cr; S-N only)

Actuarial science and related fields as careers. Lectures by practicing actuaries and others. Sample employment interviews at insurance or consulting companies.

3007H-3008H. THE WORLD OF MATHEMATICS. (1 cr per qtr; prereq #, grade of at least B in 1553H or A in a 32xx math course; a grade of B or better required to continue in sequence)

Mathematics, a subject of creative thought and the theoretical base of the scientific enterprise. Topics in pure and applied mathematics and history. Lectures by mathematicians and mathematics users. Mathematics as a career. Preview of upper division math courses.

3076. INTRODUCTION TO DISCRETE MATHEMATICS. (4 cr; prereq grade of C or better in 1261 or equiv)

Permutations and combinations, discrete graphs, trees, generating functions, recurrence relations, and related topics. Computer aspect focuses on algorithms.

3251. MULTIVARIABLE DIFFERENTIAL CALCULUS. (4 cr, §3211, §3311, §3521H, §3552H; prereq 1251, 1261)

Differentiation of parametric curves; partial differentiation, and derivative as local linear approximation; chain rule; applications to max/min problems with attention to boundaries and constraints, including Lagrange multipliers; Taylor's Theorem (multivariable) and second derivative test.

3252. MULTIVARIABLE INTEGRAL CALCULUS. (4 cr, §for students with 3311, 3331 or 3211, 3331, §3551H, §3552H; prereq §3251)

Double and triple integrals; change of variable procedures, emphasizes polar and spherical coordinates; mass and centroid; integration on curves and surfaces; vector fields and theorems of Green, Gauss, and Stokes.

3261. DIFFERENTIAL EQUATIONS WITH LINEAR ALGEBRA. (4 cr, §3221, §3321, §3531H, §3551H; prereq 1252 or 1221, 1261 or 1241 or 3142)

Differential equations, including first order equations, linear equations with constant coefficients, and linear systems. Companion topics from linear algebra: general vector spaces, independence, spanning sets, basis, dimension, eigenvalues, and eigenvectors.

3262. INFINITE SEQUENCES AND SERIES WITH METHODS OF APPROXIMATION. (4 cr; prereq §3261)

Infinite sequences and series; mathematical induction and its implications for recursively defined sequences; convergence and techniques for evaluation of sequential limits and sums of series; applications of sequences and series to approximations and estimates of error. Required for honors students who have not taken Math 1552H.

3511H. HONORS: LINEAR ANALYSIS. (5 cr, §1261; prereq 1731H)

Continuation of 1731H for mathematically talented high school students. Ideas and computations of linear algebra, including linear independence, linear transformations, matrices, and determinants. Students who complete this course may enter 3551H or any course for which 1261 is the prerequisite.

3541H. HONORS: COMPLEX ANALYSIS AND RELATED TOPICS. (4 cr, §3331, §5568; prereq 3531H or 3552H)

Differentiation of complex-valued functions of a complex variable; major theorems on analytic functions; power series, Laurent series, and topics in sequences and series.

3551H-3552H. HONORS: LINEAR AND NONLINEAR ANALYSIS II-III.

For description, see 1553H.

5005. THE DIVERSITY OF MATHEMATICS. (4 cr; prereq 1005-1006 or equiv, 10 cr of college level math, elementary education majors only; not approved for math majors)

Mathematics enrichment topics for elementary school instructors: number theory, including prime numbers and congruences; various topics involving fractions and decimals.

5006. THE DIVERSITY OF MATHEMATICS. (4 cr; prereq 1005-1006 or equiv, 10 cr of college level math, elementary education majors only; not approved for math majors)

Mathematics enrichment topics for elementary school instructors: regular and semi-regular polyhedra, map coloring, graph theory, and applications.

5007. THE DIVERSITY OF MATHEMATICS. (4 cr; prereq 1005-1006 or equiv, 10 cr of college level math, elementary education majors only; not approved for math majors)

Mathematics enrichment topics for elementary school instructors: analysis of two-person mathematical games, impartial and partisan.

5056. THEORY OF INTEREST. (4 cr; prereq 1252 or equiv)

Time value of money. Annuities, sinking funds, bonds, and similar items. Primarily for mathematics and business majors interested in actuarial science.

Major Requirements and Course Descriptions

5057-5058-5059. ACTUARIAL MATHEMATICS I-II-III. (4 cr; prereq 5056, one qtr 5xxx-level probability or statistics)

5057: Survival function; actuarial notation; actuarial present values for life insurance and life annuities.

5058: equivalence principle; net premiums and reserves; multiple life functions and multiple decrement models; valuation of pensions. 5059: Topics at instructor's discretion.

5081. FUNDAMENTAL TOPICS OF ANALYSIS.

(4 cr; prereq a 32xx math course or equiv; not approved for math majors)

Designed primarily for prospective secondary teachers. Topics in analysis to develop analytic abilities and to broaden perspective on and enhance interest in mathematics. May include real number system, theory of sets, continuous functions, and properties of limits.

5082. FUNDAMENTALS OF ALGEBRA. (4 cr; prereq 1261 or 3142 or equiv; not approved for math majors)

Designed primarily for prospective secondary teachers. Number theory including fundamental theorem of arithmetic and congruences; at least one general algebraic structure—group, ring, or field; equivalence relations; possibly other topics. Includes proofs by mathematical induction and by contradiction.

5083. FUNDAMENTALS OF GEOMETRY. (4 cr, §5332; prereq a 32xx math course or equiv)

Designed primarily for prospective secondary teachers. Non-Euclidean geometry including attention to the axiomatic approach; some topics involving three or more dimensions; some use of transformations, possibly other topics. Includes proofs by contradiction.

5151. ELEMENTARY SET THEORY. (4 cr; prereq a 32xx math course or equiv or #)

Basic properties of operations on sets, cardinal numbers, simply ordered sets, well-ordered sets, ordinal numbers, axiom of choice, axiomatics.

5152. ELEMENTARY MATHEMATICAL LOGIC.

(4 cr, §5162; prereq a 32xx math course or equiv or #) Grammar and semantics of first- and second-order languages; relational structures; a deductive system for first-order logic; completeness theorem; axiomatics of formal theories.

5162-5163-5164. MATHEMATICAL LOGIC. (4 cr per qtr; prereq 1 yr of calculus or equiv or Phil 5202 or #)

5162: Theory of computability, notion of algorithm, Turing machines, primitive recursive functions, recursive functions, Kleene Normal form, recursion theorem. 5163: Probability and truth in formal systems: propositional and predicate logic, models of axiom systems, Gödel completeness theorem, nonstandard analysis. 5164: Gödel incompleteness theorem: decidable and undecidable theories, models of arithmetic.

5209. THEORY OF NUMBERS. (4 cr; prereq a 32xx math course or equiv or #)

Rigorous introduction to the elementary theory of numbers: up to classical results about congruences to a prime modulus (e.g., Fermat's theorem). Usually covers one more advanced topic such as continued fractions, Gaussian integers, or quadratic reciprocity.

5232-5233. COMPUTER-ORIENTED LINEAR ALGEBRA. (4 cr per qtr, §5242-5243; prereq 1261 or equiv)

Linear transformations on finite dimensional vector spaces. Linear dependence, matrix algebra, inner products, orthogonality, and matrix inversion presented from algorithmic viewpoint, with students constructing and running illustrative computer programs. Eigenvalues and eigenvectors. Jordan canonical form, polar representation of linear transformations, determinants.

5242-5243. LINEAR ALGEBRA WITH APPLICATIONS. (4 cr per qtr, §5247, §5284; prereq 1261 or 3142 or equiv)

Systems of linear equations, finite dimensional linear spaces, bases, linear transformations, matrices, determinants, eigenvalues, reduction to canonical forms, quadratic and bilinear forms, applications.

5245-5246-5247. INTRODUCTION TO MODERN ALGEBRA I-II-III. (4 cr per qtr, §5282 for 5245, §5283 for 5246, §5284 for 5247; prereq 32xx math sequence or equiv or #)

Algebra at a more concrete level than 5282-5283-5284. Group theory, including normal subgroups, homomorphism, theories of Lagrange and Cayley. Ring theory including ideals, integral domains, Euclidean rings, polynomial rings; fields. Linear algebra including an abstract approach to vector spaces; linear transformations and their structure. Taking this course nonsequentially is not recommended.

5282-5283-5284. FUNDAMENTAL STRUCTURES OF ALGEBRA. (4 cr per qtr; prereq 32xx math sequence or equiv or #; some previous abstract math recommended)

Theory course, principally for students planning mathematics graduate work. Group theory: normal subgroups, homomorphism, automorphism, the theorems of Lagrange, Cayley, and Sylow. Ring theory: rings, ideals, integral domains, Euclidean rings, polynomial rings, fields. Linear algebra: abstract approach to vector spaces, linear transformations; the theory of canonical forms, including the Jordan and rational.

5331-5332-5333. GEOMETRY I-II-III. (4 cr per qtr, §3161 for 5331, §5083 for 5332; prereq 1261 or equiv) Advanced Euclidean geometry; axiomatic and analytic hyperbolic geometry; projective geometry; symmetry and geometrical transformations and their connections to linear algebra, group theory, and complex arithmetic; finite geometries; convex geometrical figures.

5341-5342. INTRODUCTION TO TOPOLOGY. (4 cr per qtr; prereq one soph sequence or #; some previous abstract mathematics recommended)

Set theory; axiom of choice, Zorn's lemma. Metric spaces: completeness, compactness, continuity. Basic point set topology: countability and separation axioms, Urysohn's lemma, compactness, connectedness, product spaces.

5343. INTRODUCTION TO ALGEBRAIC TOPOLOGY. (4 cr; prereq 5342)

Classification of two-manifolds, fundamental group, homology theory.

5375. DIFFERENTIAL GEOMETRY. (4 cr; prereq 3252 or equiv or #)

Plane and space curves. Frenet formulas, elementary theory of surfaces.

5376-5377. DIFFERENTIAL GEOMETRY. (4 cr per qtr; prereq 5375, 3261 or 3142 or equiv)

Differential forms. Advanced theory of surfaces, integral geometry, Riemannian geometry.

5404. VARIATIONAL PROBLEMS. (4 cr; prereq 3252, 3261 or equiv or #)

Introduction to the calculus of variations and its applications. Topics may include fundamental theory, Euler-Lagrange equations, necessary and sufficient conditions, stability, isoperimetric problems, rudiments of the Mayer-Lagrange-Bolza problem, multiplier rule, direct methods, Rayleigh-Ritz method, eigenvalue problems, multiple integrals.

5428. MATHEMATICAL MODELS IN ECONOMICS AND THE SOCIAL, ACTUARIAL, AND MANAGEMENT SCIENCES. (4 cr; prereq 3261 or equiv)

Mathematical models and associated mathematical techniques for describing the behavior of various systems and the solutions of certain problems. Examples from Markov processes, linear programming, queuing theory, spread of epidemics.

5447-5448-5449. MATHEMATICAL THERMODYNAMICS. (4 cr per qtr; prereq 5607 or 5613 or 5567, 5568 or #; primarily for engineers or math majors interested in applications)

5447-5448: Introduction to mathematical structures underlying classical thermodynamics. Concepts of heat, hotness, and material systems, formulation of laws of thermodynamics, the general accumulation theorem, absolute temperature, Carnot cycles (and efficiency of heat engines). Applications to quasi-static and irreversible systems, concept of entropy. 5449: Maxwell rules, equilibrium of thermal systems. Gibbsian equilibrium theory and the phase rule; applications to mixtures and to phase transitions. Thermodynamics of continuous systems. Clausius-Duhem inequality.

5457-5458-5459. METHODS OF APPLIED MATHEMATICS. (4 cr per qtr; prereq 3252, 3261 or equiv, 3262 recommended)

Modern analytic tools used in applications of mathematics; emphasis on technique. Linear algebra, ordinary and partial differential equations, calculus of variations, Fourier series, complex variables, optimization, numerical methods.

5463-5464-5465. THE MATHEMATICS OF INDUSTRIAL PROBLEMS. (4 cr; prereq 2 yrs of calculus including \mathbb{N} 3262 or equiv; familiarity with FORTRAN, Pascal, or C, #)

Industrial problems such as crystal precipitation, air quality modeling, color film developing, laser semiconductors. Theoretical foundations and computational methods involving ordinary and partial differential equations, calculus of variations, and numerical analysis. Computer techniques facilitated by access to SUN.

5473-5474-5475. ANALYSIS OF NUMERICAL METHODS. (4 cr per qtr; prereq 3252, 3261 or equiv, some computer skill recommended)

Interpolation and approximation by polynomials. Solution of linear and nonlinear systems of equations. Methods for eigenvalue problems. Numerical integration. Numerical solution of ordinary differential equations. Selected topics if time permits.

5477-5478-5479. APPLIED NUMERICAL ANALYSIS OF PARTIAL DIFFERENTIAL EQUATIONS. (4 cr per qtr; prereq 5242 or equiv, 5608 or equiv, 5513 or equiv, computer skills or #)

Numerical methods for partial differential equations of fluid dynamics, elasticity, electrostatics, and other selected systems. Computer experiments.

5512-5513. DIFFERENTIAL EQUATIONS WITH APPLICATIONS I-II. (4 cr per qtr; prereq 3261 or equiv or #)

5512: Applications, review of special techniques, and numerical approximation for first-order equations. Euler and Runge-Kutta methods with error analysis. Applications and power series solutions for second-order equations. 5513: Applications and Laplace transforms for second-order linear equations. First-order linear systems with elementary linear algebra. Phase-plane analysis with applications. Boundary value problems and an introduction to partial differential equations.

5514. INTEGRAL EQUATIONS. (4 cr; prereq 3261 or 5512 or equiv or #)

Introduction to integral equations; Fredholm formula, Neumann series, Laplace transforms, successive approximations and numerical methods. Relation of integral equations to systems of linear algebraic equations and to differential equations.

5521-5522-5523. INTRODUCTION TO ORDINARY DIFFERENTIAL EQUATIONS. (4 cr per qtr; prereq one soph math sequence or #)

5521: Brief coverage of elementary methods for general differential equations; linear systems with constant coefficients, including fundamental matrix solutions; variation of parameters in linear systems; existence and uniqueness of solutions. 5522: Basic local existence and uniqueness theory for initial value problems; stability of equilibria, flows and dynamical systems; nonlinear oscillations, particularly van der Pol's equation. 5523: Poincare-Bendixson theory; applications to ecology, differentiation of flows and stability of periodic orbits.

5567. FOURIER SERIES AND BOUNDARY VALUE PROBLEMS. (4 cr, §5571; prereq 3261 or equiv or #) Partial differential equations of theoretical physics. Fourier series, orthogonal systems. Sturm-Liouville systems, solution of boundary value problems by separation of variables, applications.

5568. ELEMENTARY THEORY OF COMPLEX VARIABLES. (4 cr, §3541H, §5572; prereq 3252 or equiv)

Derivative and integral of a function of a complex variable. Cauchy integral theorem and formula, residues. Application to evaluation of integrals, conformal mapping.

5569. OPERATIONAL MATHEMATICS. (4 cr, §5573; prereq 5568)

Laplace transforms, Fourier transforms, inversion theorems; applications to differential equations.

5571-5572-5573. ELEMENTARY PARTIAL DIFFERENTIAL EQUATIONS. (4 cr per qtr, §5568 for 5572, 5573; prereq ¶5608 or 5613 or equiv)

Partial differential equations of theoretical physics, one-dimensional wave equations, characteristics, classification of second-order equations, heat and Laplace equations, uniqueness, maximum principle, orthogonal systems, Fourier series, separation of variables. Complex numbers, derivatives and integrals of analytic functions, elementary functions and their geometry. Cauchy integral theorem and formula, Laurent expansions, evaluation of contour integrals by residues, Fourier and Laplace transforms and their inversion, method of residues, applications to ordinary and partial differential equations, applications of heat, wave, and Laplace equations.

5606-5607-5608. ADVANCED CALCULUS: A RIGOROUS APPROACH. (4 cr per qtr, §5606 for 5612, §5607 for 5613, §5608 for 5614; prereq 3252, ¶3262 or 3552H)

Basic analysis course at a more concrete level than 5612-5613-5614. Foundations of analysis: completeness of the line, limits, convergence, continuity, integration, series of functions. Analysis is on the line and in Euclidean space. Other topics of the instructor's choice.

5612-5613-5614. INTRODUCTION TO ANALYSIS. (4 cr per qtr; prereq 3252 and ¶3262, or 3552H; principally for students planning grad work in math, as preparation for grad courses in analysis)

Theory, construction, and models of the real numbers. Elements of topology. Theory and practice of differentiation and integration. Sequences and series of functions, and uniform convergence. Additional topics at instructor's discretion.

5679. PROBABILITY. (4 cr, §5681, §Stat 5131; prereq 3252 or equiv)

A one-quarter course in probability, not recommended for those going on in probability or statistics. Probability spaces, expectation; conditional probability and expectation, probability distributions and densities, repeated trials and independence. Mathematics majors cannot get credit for more than one of the trio 5679, 5681, Stat 5131.

5681-5682-5683. PROBABILITY AND STOCHASTIC PROCESSES. (4 cr; §5679, §Stat 5131 for 5681; prereq 3252)

Logical development and various applications of probability. Probability spaces, random variables and their distributions, and expected values, law of large numbers and central limit theorem, generating functions. Topics from many random walks and Markov chains, branching processes. Poisson point processes, martingales, stationary sequences, second-order processes, stochastic differential equations.

5701. ENUMERATIVE COMBINATORICS. (4 cr; prereq 3251 or equiv, jr; soph level linear algebra helpful)

Basic enumeration. Sets, permutations, distributions, partitions, generating functions (exponential and ordinary), recurrence relations, the method of inclusion-exclusion, and Polya theory.

5702. GRAPH THEORY AND OPTIMIZATION.

(4 cr; prereq 3251 or equiv, jr; soph level linear algebra helpful)

Basic concepts in graph theory. Connectedness, Hamiltonian and Eulerian paths, trees, coloring, and matchings. Topics in optimizations: networks, flows, spanning trees, and graph algorithms.

5703. CONSTRUCTIVE COMBINATORICS. (4 cr; prereq 5701 or equiv, some knowledge of a programming language)

Algorithmic and bijective approaches to permutations, subsets, trees, tableaux, and partitions, ranking and unranking algorithms. Connections with generating functions. The Lagrange inversion formula.

5900. TUTORIAL COURSE IN ADVANCED MATHEMATICS. (Cr ar; prereq #)

Qualified students whose needs are not met by courses offered may make arrangements to study content of other courses.

Microbiology (MicB)*Medical School*

Staff—*Head*, Ashley T. Haase, 1460 Mayo Memorial Building; *Director of Undergraduate Studies*, Palmer Rogers, 925 Mayo Memorial Building

Professors: Anderson, Cleary, Dworkin, Eaton, Fan, Faras, Germaine, Gray, Haase, Hanson, Hooper, Johnson, Jordan, LeBien, Magee, McKay, Orr, Plagemann, Quie, Rogers, Sauerbier, Schachtele, Schlievert, Zissler

Associate Professors: Bey, Dunny, Flickinger, Gleason, Gregerson, Hostetter, Jemmerson, Nelson, Reilly, Schottel, Southern, Wells

Assistant Professors: Brooker, Conklin, Fontana, Jenkins, Mathur, McIvor, Sadowsky, Scherer, Schiff, Sherman, Wackett

Microbiology is the branch of biological science that deals with the nature and activities of microorganisms, the distinctive microscopic life forms that recycle the elements in aquatic, atmospheric, and soil environments. Their potentials may be directed to the benefit of people through applications in industry, agriculture, and medicine, or to their harm in disease and spoilage. As remarkably useful model systems for research, microorganisms play a key role in the development of modern biology.

The Department of Microbiology offers a program leading to the B.A. degree in the College of Liberal Arts and one leading to the B.S. degree in the College of Biological Sciences. Information about the B.S. program may be found in the *College of Biological Sciences Bulletin*.

The major sequence leading to the B.A. degree permits the selection of microbiology or related courses appropriate to your interests in such areas as pathogenic mechanisms, ecology of microorganisms, or microbes and humans.

B.A. Major Sequence

Required Preparatory Courses—Biol 1009, 1103 or 1106 or 3011 or 3012; Chem 1051-1052, 3100-3101, 3301-3302, 3305-3306, and 3303 or Biol 5001; Math 1251-

1252, 1261 or Stat 3011-3012 or PubH 5450-5451-5452-5453; Phys 1041-1042-1045-1046 or 1104-1105-1106-1107-1108-1109 or 1271-1275-1281-1285-1291-1295 or 1275-1285-1295-1311-1321-1331-1341

Major Requirements—3103 or 5105 or VPB 3103 or Biol 5013; three of the following: MicB 5218, 5232, 5321, 5352, 5424, 5611; two of the following: MicB 5234, 5322, 5425, 5990 (minimum of two 4 cr qtrs in one faculty laboratory); 5900 8-10 3xxx-5xxx cr in microbiology or related courses (depending on your interests; related courses may be in biology, plant biology, food science and nutrition, genetics and cell biology, medical technology, public health, laboratory medicine, or ecology, evolution, and behavior). A minimum of two courses will complete the major. Students are urged to include genetics and ecology in their programs; Genetics: GCB 3022, Biol 5003, EEB 5044; Ecology: Biol 5041, EEB 3001, 3004.

3103.¹ GENERAL MICROBIOLOGY. (5 cr, §5015, §Biol 5013, §VPB 3103; prereq soph with C average in prereq courses to major sequence or jr with 10 cr chemistry and 5 cr biological sciences or #; offered through Extension)

Morphology, physiology, taxonomy, and ecology of bacteria. Applications of fundamental principles. Laboratory.

VPB 3103f,s.¹ GENERAL MICROBIOLOGY. (5 cr, §Biol 5013, §MicB 3103, §MicB 5105, §Biol 5013; not open to veterinary medical students; prereq 10 cr chemistry, 4 cr biological sciences) Maheswaran Morphology, genetics, physiology, and ecology of microorganisms. Application of principles of microbiology to immunity and medicine.

Biol 5013f,w,s.¹ MICROBIOLOGY. (5 cr, §Biol 3013, §MicB 3103, §MicB 5105, §VPB 3103; prereq 5 cr biological sciences, 10 cr organic chemistry or #) Dunny, Hanson, Sherman

Taxonomy, anatomy, physiology, biochemistry, and ecology of microbes. Molecular structure in relation to bacterial function. Laboratory.

¹Microscope required. Students may obtain use of microscope by purchasing a \$6 microscope card from the bursar.

Major Requirements and Course Descriptions

CLS 5103w. PRINCIPLES OF DIAGNOSTIC MICROBIOLOGY. (3 cr; prereq general course in microbiology, #)

Current techniques in laboratory diagnosis of infectious disease; isolation and identification of bacteria and yeast; antibiotic sensitivity testing.

5105f, w, s.¹ BIOLOGY OF MICROORGANISMS.

(5 cr, §3103, §Biol 5013, §VPB 3103; prereq 5 cr biological sciences, 10 cr organic chemistry or #) Dunny, Hanson, Sherman

Taxonomy, anatomy, physiology, biochemistry, and ecology of microbes. Molecular structure in relation to bacterial function. Laboratory.

FScN 5120w. FOOD MICROBIOLOGY. (5 cr; prereq MicB 3103)

Relationship of environment to occurrence, growth, and survival of microorganisms in foods; evaluation of microbiological quality of dairy and food products; characteristics and activities of bacteria, yeasts, and molds related to food spoilage; use of microorganisms in manufacture of dairy and food products; recognition and control of food-borne pathogens and food poisoning.

FScN 5122s. CONTROL OF MICROORGANISMS IN FOOD PROCESSING. (2 cr; prereq FScN 5120 or #; ¶FScN 5123 recommended, especially for food science and technology majors)

Factors that influence control and destruction of microorganisms; chemical, physical, and microbiological principles in cleaning and sanitizing dairy and food processing equipment; inactivation of microorganisms and thermal process evaluation; microbiological and reservation methods; development of sanitation programs; microbiological criteria; hazard analysis and critical control point concept.

FScN 5123s. MICROBIOLOGY OF FOOD FERMENTATIONS. (2 cr; prereq FScN 5120 or #; ¶FScN 5122 recommended, especially for food science and technology majors)

Characteristics of bacteria, yeasts, and molds involved in dairy and food fermentations; properties of lactic bacteriophages, methods of control in dairy fermentations; composition and factors that influence activity of dairy and food starter cultures; microbiology of natural and controlled fermentations; use of microorganisms in production of single-cell protein of food products, and in waste use.

Biol 5125s. RECOMBINANT DNA LABORATORY.

(4 cr §Biol 5125; prereq #; application necessary)

Introduction to basic recombinant DNA techniques.

Methods for growing, isolating, and purifying recombinant DNAs and cloning vectors.

5125s. RECOMBINANT DNA LABORATORY. (4 cr; application necessary, § Biol 5125; offered through Extension)

Introduction to basic recombinant DNA techniques.

Methods for growing, isolating, and purifying recombinant DNAs and cloning vectors.

CLS 5133s. MEDICAL MYCOLOGY. (4 cr; prereq medical microbiology, diagnostic microbiology or #; offered when feasible)

Laboratory diagnosis of infections caused by yeasts, dermatophytes, and systemic fungi.

PubH 5171f. ENVIRONMENTAL MICROBIOLOGY. (3 cr; prereq MicB 3103 or #)

Survival, dissemination, transportation, and significance of microorganisms in the environment; application of principles to environmental health problems.

5218w. IMMUNOLOGY. (3 cr; prereq Biol 5001) Gray

Cellular, protein, and genetic bases of humoral immunity; methods used to measure antibodies and antigens. T lymphocytes: interaction of T helper cells with B lymphocytes and other T cells in cell-mediated immunity. Clinical immunology: immunodeficiency, allergy, autoimmunity, transplantation.

5232w. MEDICAL MICROBIOLOGY. (3 cr; prereq

5216 or 5218, 5105 or 3103 or 8110 or Biol 5013; not open to medical students) Cleary

Pathogenic bacteria and fungi, mechanisms of pathogenicity and virulence; properties of microorganisms and their animal hosts that influence the outcome of host-parasite relations analyzed from genetic and metabolic view.

5234w.¹ IMMUNOLOGY AND MEDICAL MICROBIOLOGY LABORATORY. (3 cr; prereq 5218 or

¶5218, 5232 or ¶5232) Cleary, Gray

Exercises demonstrating the principles that determine the outcome of host-parasite interactions. Experiments focus on methods basic to host defense and immunology, including the immunochemical and microbiological methods used to diagnose infectious disease.

5235f. MICROORGANISMS AND DISEASE. (3 cr;

prereq 10 cr chemistry, 5 cr biological sciences or #;

not open to microbiology majors) Johnson

Nature of microorganisms, immunology, medical bacteriology, virology, mycology, parasitology, and principles of disease control.

5231f. PHYSIOLOGY OF BACTERIA. (3 cr; prereq

3103 or 5105 or Biol 5013 or VPB 3103, Biol 5001,

3 cr genetics) Rogers

Chemical and physical organization of bacteria as related to function; growth; energy metabolism, including oxidations and fermentations; nutritional requirements; antimicrobial agents; autotrophic mechanisms; microbial differentiation.

5232f. MICROBIAL DIVERSITY AND PHYSIOLOGY LABORATORY. (2 cr; prereq 5321 or ¶5321 or

equiv) Dworkin, Rogers

Isolation from natural sources and study of the physiology and metabolism of a wide variety of microorganisms such as *Clostridium*, yeast, *Caulobacter*, myxobacteria, *Leptospira*, photosynthetic bacteria, *Bdellovibrio*, luminescent bacteria, others.

PubH 5342f, w, s. PUBLIC HEALTH LABORATORY PRACTICE. (Cr ar; prereq MicB 5216, 5232, 5234, #)

Bacteriologic and serologic diagnosis, public health laboratory administration and methods.

5352s. APPLIED MICROBIOLOGY. (4 cr; prereq 5321 or #) Flickinger

Microbial adaptation to various environments; role of microorganisms in the earth's biogeochemical cycles. Application of microbial systems to industrial processes; basic principles of fermentation technology; microbial bioconversions and product formation. Biodegradation of chemicals.

5424s.¹ BIOLOGY OF VIRUSES. (3 cr; prereq 5321 or Biol 5001 or #) Plagemann

Structure, composition, and properties of bacterial, plant, and animal viruses; interaction with cells, effects on host cell metabolism; biochemistry of viral replication; techniques in study of viruses and viral infections; viral tumorigenesis.

5425s. VIROLOGY AND MICROBIAL GENETICS LABORATORY. (3 cr; prereq 5424 or equiv, Biol 5001 or 5003, GCB 3022 or 5022 or #) Plagemann, Saverbier, Schiff

Laboratory course designed to familiarize students with modern techniques in virology and microbial genetics: animal cell culture, virus infectivity titrations, analysis of viral nucleic acids and proteins by radiolabeling, gel electrophoresis and blot hybridizations, cell transformation by tumor viruses and DNA, analysis and mapping of mutants in microorganisms.

5611s. MICROBIAL ECOLOGY. (3 cr, §Soil 5605; prereq 3103 or 5105 or Biol 5013 or Soil 5610 or #; A-F only) Sadowsky

Interrelationship of microorganisms with terrestrial, aquatic, and organismal environments; survey of bacterial, fungal, and algal components of ecosystems; evolution and structure of microbial communities; population interactions within ecosystems; quantitative and habitat ecology; biogeochemical cycling; and biotechnological approaches to study of microbial ecology.

5900f, s. TOPICS IN MICROBIOLOGY. (1 cr per qtr; prereq sr microbiology major; S-N only) Staff
Seminars on research programs, historical perspectives, significant emerging fields, professional societies and publications, career opportunities.

5970f, w, s, su. DIRECTED STUDIES. (Cr ar; prereq #, Δ) Rogers, staff
Guided individual studies.

5990f, w, s, su. UNDERGRADUATE RESEARCH. (Cr ar; prereq #, Δ) Rogers, staff
Guided individual research.

¹Microscope required. Students may obtain use of microscope by purchasing a \$6 microscope card from the bursar.

Military Science

See Reserve Officers' Training Corps.

Modern Greek

See Classical and Near Eastern Studies.

Music (Mus)

Staff—Acting Director, Vern Sutton, 200 Ferguson Hall; *Director of Undergraduate Studies,* John Anderson; *Associate Director/Director of Graduate Studies,* David Grayson; *Assistant Director,* Rodney Loeffler; *Assistant to the Director,* Linda Fisher; *Music Librarian,* Laura Probst; *Head, Band/Winds/Jazz Studies,* David Baldwin; *Head, Orchestra/Strings,* Tanya Remenikova; *Head, Choral/Opera/Vocal Studies,* Lawrence Weller; *Head, Composition/Theory,* Dominick Argento; *Head, Keyboard and Fretted Instruments,* Alexander Braginsky; *Head, Music Education/Therapy,* Paul Haack; *Head, Musicology/Ethnomusicology,* James Hepokoski

Regents' Professor: Argento (on leave 1992-93)

Ethel Hitchcock Endowed Chair in Accompanying and Coaching: Garrett

Professors: Anderson, Baldwin, Benciscutto (on leave 1992-93), Braginsky, Cardamone-Jackson, Haack, Hepokoski, T. Lancaster, Maurice, McClary, Remenikova, Sutton, Ultan, A. Vamos (on leave), R. Vamos (on leave), Zaimont

Associate Professors: Artymiw, Billmeyer, Borg, Cherlin, Damschroder, Furman, Grayson, Kagan, Kim, Lubet, McCoy, McCurdy, McNab, Schultz, Shockley, Sidlin, Ware, Weller

Assistant Professors: Ashworth, Herzberg

Affiliated Faculty—Betts, Bogorad, Bordner, Brown, Burris, Clute, Dahlgren, Dirlam, D. Eagle, E. Eagle, Fine, Finney, Fleezanis, Greenbank, Hamilton, Hara, Haugen, Holub, Jamieson, Kamminga, Kierig, N. Lancaster, Laskin, Laureano, McGuire, F. Miller, J. Miller, Raynor, Tolbert, Ullery, Van, West, Winslow

Major Requirements and Course Descriptions

The School of Music offers the B.A. and B.M. degrees in music, music education and in music therapy.

The B.A. program is designed for students who wish to major in music while enrolling in a diversified program of elective coursework outside the major. The program is divided into two tracks allowing for concentration of study in either an academic area such as music history/musicology or composition/theory, or in performance.

The B.M. program is for students who wish to complete professional studies in performance, jazz studies, composition and theory, music education, or music therapy. A total of 180 credits (185 for instrumental music education, 190 for music therapy), including electives in music and nonmusic studies, are required for graduation; a minimum of 117 of these credits must be in music. Before entering the junior year of applied study, you must take a qualifying examination in which you perform (play or sing) in the area of your specialty.

The B.M. program in music education is offered in the College of Liberal Arts, with teaching licensure through the College of Education. There are two undergraduate majors in music education: music education (with concentrations in instrumental or choral/general music) and music therapy.

To be admitted to the major for any of the degree programs, you must audition and be placed in a suitable level of applied music study. Transfer students are placed on the basis of an entrance audition and examinations in music theory, music history, and piano.

You should consult with a School of Music adviser in selecting appropriate courses. All music and music education courses required for a degree must be taken with the A-F grading option; no S-N credits will be counted toward the fulfillment of degree requirements (MuEd 3850 in music therapy is the one exception to this rule [S-N required].) You must earn a grade of C or better in major courses in order to satisfy degree requirements and to be allowed to continue in sequence courses.

The general education requirements for the B.A. and B.M. degrees are outlined on page 8 of this bulletin.

The School of Music is a full member of the National Association of Schools of Music.

Note: Courses preceded by the concurrent symbol (¶) in School of Music course listings must be taken simultaneously with the course being described.

Study Abroad—Applied music studies or relevant academic research in Europe or a non-Western country is encouraged. Upon faculty review, credits can be applied toward the B.M. or B.A. degrees. Further information on study abroad opportunities and procedures is available from the director of undergraduate studies of the School of Music and in the Foreign Study section of this bulletin.

Core Curriculum for all B.A. and B.M. degrees in music: (46 cr)

(Preparatory courses in music theory [1003, 2 cr] and ear training [1004, 2 cr] will be required of all students not able to pass diagnostic examinations upon entrance to the program. These credits may not be counted toward graduation requirements in music.)

Music theory: 1531-1532; 1533-3531-3532 (3 cr per qtr)

Ear training: 1511-1512; 1513-3511-3512 (1 cr per qtr)

Class piano: 1151-1152-1153 or 1521-1522-1523 (2 cr per qtr)

Music history: 1602 (3 cr); 3604-3605-3606 (5 cr per qtr)

Basic conducting: 3441 (2 cr)

Ensembles: see departmental guidelines for ensemble classification/requirements; total credits required are listed below. *Note:* A primary ensemble must be taken concurrently with major level applied lessons.

B.A. Major Sequence—Academic Track

Major Requirements in addition to core curriculum—Applied music (major instrument or voice): 6 qtrs (12 cr min) at the 12xx level or higher

Ensemble: 6 qtrs (6 cr min)

Major project: 3995

Music electives: 18 cr at the 3xxx-5xxx level (15 cr min in musicology/theory; remaining 3 cr may not be applied or ensemble study)

B.A. Major Sequence—Performance Track

Major Requirements in addition to core curriculum—Applied music (major instrument or voice): 9 qtrs (18 cr) (6 qtrs min at 12xx; 3 qtrs at 32xx)

Ensemble: 9 qtrs (9 cr min)

Major project: 3995 (2 cr)

Music electives: 9 cr (4 cr min in musicology/theory; remaining 5 cr may not be applied or ensemble study)

B.M. Major Sequence—Performance

Major requirements in addition to core curriculum—Applied music (major instrument or voice): 3 qtrs (12 cr min) at the 12xx level; 3 qtrs (12 cr min) at the 13xx level; 6 qtrs (24 cr min) at the 33xx level

Advanced music theory: 5531, 5532 (3 cr per qtr)

Major project: 3995 (2 cr)

Music electives: to total a minimum of 117 credits in music

Special Requirements:

String, Woodwind, Brass, and Percussion majors:

Ensemble: 12 qtrs

Chamber Ensemble: 5 cr

Piano major:

Ensemble: 3 qtrs

Accompanying: 1180 (3 qtrs, 1 cr per qtr)

Piano Literature: 5744, 5745, 5746 (2 cr per qtr)

Voice major:

Ensemble: 12 qtrs

Diction for Singers: Mus 1161-1162-1163, 1164-1165-1166 (1 cr per qtr) Languages: French, German, Italian (5 cr each; substitutes for the 12 cr of upper division, elective coursework required outside the major)

Vocal Repertoire: 3741-2 (2 cr per qtr)

Classical Guitar major:

Ensemble: 6 qtrs

Baroque Performance Practices: 5182 (4 cr)

Organ major:

Ensemble: 6 qtrs

Organ Literature: 5747, 5748, 5749 (2 cr per qtr)

Harp major:

Ensemble: 12 qtrs

B.M. Major Sequence—Theory and Composition

Major Requirements in addition to core curriculum requirements—Applied music (major instrument or voice): 6 qtrs (12 cr min) at the 12xx level or higher; 6 qtrs (12 cr min) at the 32xx level

Advanced music theory: 5531, 5532 (3 cr per qtr)

Composition: 3551-3552-3553 (2 cr per qtr)

Orchestration: 5561-5562-5563 (2 cr per qtr)

Counterpoint: 5541-5542 (4 cr per qtr)

Ensemble: 12 qtrs (12 cr min)

Major project: 3995 (2 cr)

Music electives: to total a minimum of 117 cr in music

B.M. Major Sequence—Jazz Studies

Major Requirements in addition to the core curriculum—Applied music (major instrument or voice): 6 qtrs (12 cr min) at the 12xx level or higher; 3-6 qtrs (6 cr min) at the 32xx level

Band/Choir: 3 qtrs (3 cr min)

Jazz ensemble: 1340, 5340 5 qtrs (5 cr min)

Jazz combo: 4 qtrs (4 cr)

Jazz Improvisation: 3331, 3332, 3333 (2 cr each)

Afro-American and African studies: Afro 1301, 3108

Jazz Pedagogy: 5341 (2 cr)

Jazz Theory: 5342 (2 cr)

Jazz class piano: 1351, 1352

Jazz Arranging: 5336; 5337 (2 cr per qtr)

Recital: senior year: 3995 (2 cr)

Music electives: to total a minimum of 117 cr in music

Major Requirements and Course Descriptions

B.M. Major Sequence—Music Education and Music Therapy

The B.M. in music education is offered in the College of Liberal Arts, with teaching licensure through the College of Education. There are two undergraduate majors in music education: music education (with concentrations in instrumental or choral/general music) and music therapy.

Precollege Music Preparation—An extensive background in high school instrumental or vocal music ensembles is expected. Private lessons in voice or on a band/orchestral instrument are a very desirable aspect of preparation. You must meet the School of Music entrance requirements for performance in one of the following areas of applied music: voice, piano, organ, classical guitar (for the choral/general concentration); a standard band or orchestral instrument (for the instrumental concentration); and either of those for the therapy concentration. Piano lessons as well as beginning-level music theory (fundamentals) and music history/literature preparation via classes or individual study with texts, computer programs, and recordings will be advantageous. Conducting and leadership experiences also prove helpful.

Admission—You must complete two years (90 credits) of coursework in music and liberal arts areas before admission to the music education program. A minimum cumulative grade average of C+ (2.50) must be earned in all music coursework. An overall grade average of C (2.00) must be earned for all courses (music and nonmusic).

You must also complete an interview with a major adviser in music education or music therapy before your application for admission will be given final consideration.

Major requirements in addition to core curriculum in the first two years:

General Psychology: Psy 1001 (5 cr)

Music Education majors: MuEd 1201 Introduction to Music Education (1 cr)

Music Therapy majors: MuEd 1801 Introduction to Music Therapy (1 cr)

Choral/General Music Education Concentration

This program is designed for vocalists, keyboard performers, or classical guitarists desiring to teach choral and classroom music in the elementary and secondary schools. Students completing this program will meet the requirements for licensures to teach vocal and classroom music grades K-9 as well as vocal and classroom music grades 5-12 in Minnesota.

Music Courses

Applied Music: Min 11 qtrs (22 cr) with majors in voice, piano, organ, or guitar:

12 cr lower division lessons: MusA 1201—Piano, MusA 1203—Organ, MusA 1204—Voice or MusA 1223—Guitar

10 cr upper division lessons: MusA 3201—Piano, MusA 3203—Organ, MusA 3204—Voice or MusA 3223—Guitar

Secondary Applied Study: (min 6 cr)

For non-voice majors: MusA 1404 Voice, Secondary Required (2 or 4 cr/qtr) or Mus 1160 Voice Class Lessons (2 cr/qtr)

For Non-keyboard majors: Mus 1151-1152-1153 Piano Class Lessons (2 cr/qtr)

For keyboard majors: Mus 1521-1522-1523 Keyboard Harmony (2 cr/qtr)

Ensemble: Minimum of 11 quarters required, to be selected in consultation with your adviser.

Mus 3331 Jazz Improvisation I (2 cr)

Professional Education Courses

MuEd 3301 Teaching Vocal and General Music, K-4 (4 cr)

MuEd 3302 Teaching Vocal and General Music, Grades 5-12 (4 cr)

MuEd 3322 Techniques of Classroom Instruments (4 cr)

MuEd 3331 Practicum: Music Education (2 cr)

MuEd 3415 Choral Laboratory (4 cr)

MuEd 3650 Student Teaching in Music (12 cr)

EPsy 5119 Learning and Cognition (4 cr)

EPsy 5139 Interpersonal and Personality Effects on Learning (4 cr)

EPsy 5229 Measurement and Assessment (2 cr)

SeEd 5250 Secondary School Teaching (3 cr)

SeEd 5251 Orientation in Secondary Schools (2 cr)

EdPA 5090 School and Society (3 cr)

PubH 3004 Basic Concepts in Personal and Community Health (5 cr)

Admission to Student Teaching

You should meet with your major adviser early in the spring quarter of your junior year to plan your student teaching experience. You must have completed all professional education courses (with the exception of EdPA 5090), all major courses in theory, ear-training, music history, secondary applied study, and a minimum of 9 credits in ensembles with a GPA of C+ (2.50) in all major and professional education courses. Grades for ensemble courses are not counted in calculating the GPA. Twelve credits of applied music in 1xxx-level courses and a minimum of 6 credits in 3xxx-level courses must be completed in the study of the major instrument or voice.

Instrumental Music Education Concentration

This program is designed to prepare you to teach band, orchestra, and general music in elementary and secondary schools. Students successfully completing the program will meet licensure requirements to teach band grades K-12, orchestra grades K-12, and classroom music grades 5-12 in Minnesota.

Music Courses

Applied Music: Min. 9 qtrs (18 cr) on principal instrument (standard band or orchestral instrument)

12 cr lower division principal lessons (12xx or higher)

6 cr upper division principal lessons (32xx)

(See Applied Music listings for specific course numbers.)

Secondary Applied Study: (min. 4 cr)

You must select one woodwind and one brass instrument as a secondary instrument for study for one quarter each (MusA 14xx, 2 cr/qtr; see Applied Music listings for specific course numbers).

Mus 3331 Jazz Improvisation I (2 cr)

Ensemble: required during 11 quarters c.f. on-campus study (minimum 12 cr) to be selected in consultation with your adviser. Marching band experience is recommended if your major performance instrument is in brass, woodwind, or percussion. Chamber ensemble experience is required during two quarters of on-campus study (minimum 2 cr).

10 credits from Mus 3410 Concert Band, Mus 1480 Marching Band, OR Mus 3420 Orchestra

2 credits from any of the following: Mus 5360 Woodwind Ensemble, Mus 5380 Brass Choir, Mus 5390 Percussion Ensemble, Mus 3440 Ensemble, Mus 5340 Jazz Ensemble (1 cr each).

Professional Education Courses

MuEd 3302 Teaching Vocal and General Music, Grades 5-12 (4 cr)

MuEd 3500 String Techniques I (3 cr)

MuEd 3501 String Techniques II (3 cr)

MuEd 3503 Woodwind Techniques (4 cr)

MuEd 3504 Brass Techniques (4 cr)

MuEd 3505 Percussion Techniques (4 cr)

MuEd 3515, 3516 Instrumental Laboratory, I, II (4 cr each)

MuEd 3650 Student Teaching in Music (12 cr)

EPsy 5119 Learning and Cognition (4 cr)

EPsy 5139 Interpersonal and Personality Effects on Learning (4 cr)

EPsy 5229 Measurement and Assessment (2 cr)

SeEd 5250 Secondary School Teaching (3 cr)

SeEd 5251 Orientation in Secondary Schools (2 cr)

EdPA 5090 School and Society (3 cr)

PubH 3004 Basic Concepts in Personal and Community Health (5 cr)

Major Requirements and Course Descriptions

Admission to Student Teaching

See information above for Choral/General Concentration.

Major in Music Therapy

The music therapy program is designed to prepare you to serve in educational and medical environments to influence changes in the behavior of children and adults through music. Upon successful completion of the course of study and the six-month internship, you are eligible to become a registered music therapist through application to the National Association for Music Therapy (NAMT).

Music Courses

Applied Music: Min 9 qtrs (18 cr) selected in consultation with your adviser.

6-12 cr of 12xx (principal study in a standard band or orchestral instrument or voice, piano, organ or guitar)

6-12 cr of 14xx (secondary required study) or class lessons.

(See Applied Music listing for course numbers.)

Guitar Proficiency

Mus 3331 Jazz Improvisation I (2 cr)

Ensemble: Minimum 9 credits (1 cr/qtr for 9 quarters; 3 qtrs primary ensemble, 6 qtrs elective ensemble)

Related Course Requirement

Psy 3604 Abnormal Psychology (4 cr)

Biol 1009 General Biology (5 cr)

CBN 3001 Elementary Anatomy (4 cr) or

CBN 1027 Anatomy for Physical Education Students (4 cr)

Behavioral/Social/Health Science; Special Education Courses

Total of 14 credits required to include:

EPsy 5139 Effects on Learning (4 cr)

Professional Education Courses

MuEd 3322 Techniques of Classroom Instruments (4 cr)

MuEd 3415 Choral Laboratory (4 cr)

MuEd 3500 String Techniques I (3 cr) or

MuEd 3501 String Techniques II (3 cr)

MuEd 3503 Woodwind Techniques (4 cr)

MuEd 3504 Brass Techniques (4 cr)

MuEd 3505 Percussion Techniques (4 cr)

MuEd 3515 Instrumental Laboratory I (4 cr)

MuEd 3800 Observation in Music Therapy (2 cr)

MuEd 3801, 3802 Psychology of Music I, II (4 cr each)

MuEd 3804 Music Therapy Techniques I (4 cr)

MuEd 3805, 3806 Music Therapy Techniques II, III (3 cr each)

MuEd 3850 Field Experiences: Music Therapy (6 cr; 1-2 cr per qtr)

MuEd 3851, 3852 Internship: Music Therapy (6 cr each)

Courses in dance and dance therapy are recommended.

Admission to Internship

You should meet with your major adviser early in the spring quarter of your junior year to plan your internship experience. You must have completed all coursework to be eligible to register for MuEd 3851, 3852. A GPA of C+ (2.50) is required in all related courses and professional education courses, and you must have satisfactorily completed all field experience requirements.

Minor Sequence

All three plans for the music minor require the following preparatory courses in music theory, ear-training, and class piano: Mus 1531-1532, Mus 1511-1512, Mus 1151-1152-1153 (14 cr).

All music minor programs must be approved by the director of undergraduate studies; all credits must be taken A/F; a maximum of 4 upper division credits (2 of applied lessons) may be transferred to the minor.

Plan A: Music in Society and Culture

Minor Requirements—15 upper division credits in musicology (cannot include non-major courses).

Plan B: Performance (16 cr)

Admission to the performance minor requires successful completion of an entrance audition.

Minor Requirements—8 cr applied music (MusA 38xx) with concurrent registration in ensembles; 4 cr ensembles; 4 cr upper division musicology or theory course(s) (cannot include nonmajor courses)

Plan C: Jazz Studies (15 cr)

Admission to Jazz Studies requires successful completion of an entrance audition.

Minor Requirements—6 cr applied music (MusA 38xx) with concurrent registration in ensembles required; 3 cr jazz ensemble; 6 cr chosen from: Jazz Improvisation (Mus 3331-3332-3333, 2 cr per qtr) and/or Black Music: A History of Jazz (Afro 3108, 4 cr).

Introductory and Survey Courses (For Nonmusic Majors)

1001f,w,s. FUNDAMENTALS OF MUSIC. (4 cr, §1003, §1004; for nonmusic majors)
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.

1021f,w. INTRODUCTION TO MUSIC. (5 cr, §3021) Staff
Music in the repertory of our culture—forms and styles 17th-20th century. Aural analyses, relationships of large units of musical form.

1804. WORLD MUSIC. (4 cr) Kagan
Music in universal perspective. Traits, distinguishing styles, and cultural factors that influence musical creativity. Music of different cultures compared to examine forms and traits, to develop listening abilities, and to develop an understanding of human musical expressions.

3021w,s. INTRODUCTION TO MUSIC. (5 cr, §1021; open to jr and sr nonmusic majors) Staff
Similar to 1021, but more extensive.

3026. MOZART. (4 cr; prereq nonmusic major) Grayson
Life and works of Mozart: vocal and instrumental compositions discussed in terms of aural analysis, biography, and social context; comparative listening to "traditional" and "historically informed" performances; historical and contemporary perspectives on Mozart.

3027. LYRIC SONG IN MEDIEVAL AND RENAISSANCE CULTURE. (4 cr; for nonmusic majors)

Cardamone-Jackson
Oral, popular, and courtly song traditions in sociocultural contexts. Status and roles of women. Analysis and criticism approached from different disciplinary perspectives.

3028. SYMPHONIC MUSIC IN THE 18TH AND 19TH CENTURIES. (4 cr; for nonmusic majors)

Cardamone-Jackson
Aural perception of styles in symphony, overture, and tone poem; cultural perspective through primary sources and literary works.

3029. MUSIC IN THE 20TH CENTURY. (4 cr; for nonmusic majors) Cardamone-Jackson

Aural perception of modern styles; cultural perspectives through primary source readings.

3045. THE AVANT-GARDE. (4 cr; prereq nonmusic major or #) Lubet

Avant-garde compositional trends, 1950-1970, including indeterminacy, improvisation, and process/minimalism in their aesthetic, historical, and social context.

Instrumental and Jazz Ensembles

1340f,w,s. JAZZ ENSEMBLE. (1 cr per qtr [6 cr max]; prereq audition, #) McCurdy
A 20-member performing organization covering significant jazz compositions and arrangements written specifically for this medium.

1440f,w,s. ENSEMBLE. (1 cr per qtr; prereq #)
Performance of chamber music of major and minor composers: sonatas, trios, quartets, quintets, other forms. Combinations of vocal and instrumental chamber ensemble materials.

1480. MARCHING BAND. (1 cr per qtr; prereq #) Kopetz
A 250-member performing organization open to players from all colleges; performs at University football games and other athletic functions.

3220. CHAMBER WINDS. (1 cr; prereq #)
Performance of chamber wind repertoire.

3290. JAZZ SINGERS. (1 cr per qtr; prereq #) McCurdy
Sight reading, study and performance of representative vocal jazz literature.

3410f,w,s. CONCERT BAND. (1 cr per qtr; prereq #)
Wind ensemble and symphony bands perform standard and contemporary literature; concerts and tour appearances. Players from all colleges may participate.

3420f,w,s. ORCHESTRA. (1 cr per qtr; prereq #) Sidlin
Symphony orchestra performs standard repertory and major works with University Chorus; concerts and tour appearances. Players from all colleges may participate.

Major Requirements and Course Descriptions

3440f, w.s. ENSEMBLE. (1 cr per qtr; prereq audition)
For description, see 1440.

5320. CHAMBER ORCHESTRA. (1 cr; prereq #)
Sight-reading, study, and performance of representative chamber orchestra repertoire.

5330. CONCERTO GROSSO ENSEMBLE. (1 cr; prereq #) Kim
Study and performance of string orchestra and small chamber orchestra literature.

5340f, w.s. JAZZ ENSEMBLE. (1 cr per qtr [6 cr max]; prereq audition, #) McCurdy
For description, see 1340.

5360. WOODWIND ENSEMBLE. (1 cr per qtr; prereq audition) Anderson
Practice and performance of chamber music for combinations of woodwind instruments in small groups (three or more players) and in large homogeneous instrumental choirs.

5380f, w.s. BRASS CHOIR. (1 cr per qtr; prereq #) Baldwin
Practice and performance of brass ensemble literature from the antiphonal music of Giovanni Gabrieli to works of the 20th century.

5390f, w.s. PERCUSSION ENSEMBLE. (1 cr per qtr; prereq #)
Practice and performance of standard and contemporary compositions for percussion ensembles in various combinations.

5450f, w.s. COLLEGIUM MUSICUM. (1 cr per qtr; prereq audition) McClary
Small ensembles of singers and instrumentalists; study and performance of early music.

5460f, w.s. NEW MUSIC ENSEMBLE. (1 cr per qtr; prereq #) Lubet
Practice and performance of recent music for various combinations of vocal and instrumental ensembles.

Instrumental and Jazz Studies

1351, 1352, 1353. JAZZ CLASS PIANO. (2 cr per qtr; prereq 1153 or #) Hamilton
Keyboard skill development in chord-style symbology, reading chord progressions, translating chord symbols into formula voicings, expanded harmonies, aural development, jazz style "comping."

3331. JAZZ IMPROVISATION I. (2 cr; prereq #) Hamilton
Rudiments; analysis; improvisation on blues in three major keys and standard American popular jazz compositions from swing era to early bebop; application of major and minor scales; ear training.

3332. JAZZ IMPROVISATION II. (2 cr; prereq 3331 or #) McCurdy
Transposition; analysis; improvisation on blues in three major keys and standard American popular jazz compositions from swing era to early bebop; II-V-I progressions; ear training.

3333. JAZZ IMPROVISATION III. (2 cr; prereq 3332 or #) McCurdy
Transcriptions; analysis; improvisation on blues in minor keys and standard American popular jazz compositions from swing era to early bebop; turnbacks; original compositions.

3441. BASIC CONDUCTING. (2 cr; prereq music major, Mus 1533) Sidlin
Beginning course in basic conducting techniques and role of the conductor.

5016s. TRUMPET PEDAGOGY. (2 cr; prereq 12 cr lower div trumpet lessons) Baldwin
Principles of trumpet pedagogy. Discussion of literature, history, and current teaching aids.

5150. BODY AWARENESS IN ACTIVITY—THE ALEXANDER TECHNIQUE FOR MUSICIANS. (2 cr; prereq music major or #)
Introduction to Alexander technique with applications to music performance. Emphasizes body/mind awareness to promote technical ease and freedom.

5321-5322-5323. SUZUKI VIOLIN PEDAGOGY. (2 cr per qtr; prereq undergrad or grad string major with violin as principal or #; MacPhail Center only) Bjork
Philosophy and teaching techniques of Japanese pedagogue Shinichi Suzuki and their application in Western culture. Discussions, playing experience, and observation of childrens' lessons in the MacPhail Center Suzuki program.

5324-5325-5326. ADVANCED SUZUKI VIOLIN PEDAGOGY. (2 cr per qtr; prereq 5321-5322-5323 or equiv, audition)
Intensive examination of Suzuki techniques for intermediate and advanced violin students in Western society. Discussion, playing experience, observation of childrens' lessons in the MacPhail Center Suzuki program, and practical teaching experience.

5336. JAZZ ARRANGING I. (2 cr; prereq 3532 or #) McCurdy
Beginning techniques of arranging for chamber jazz ensemble; vocal and instrumental.

5337. JAZZ ARRANGING II. (2 cr; prereq 3532, 5336 or #) McCurdy
Intermediate and advanced techniques of arranging for chamber jazz ensemble; vocal and instrumental.

5341. JAZZ PEDAGOGY. (2 cr; prereq #) McCurdy
Principles of jazz pedagogy. Teaching methods of jazz improvisation (vocal and instrumental), arranging, jazz history, bibliographies.

5342. JAZZ THEORY. (2 cr; prereq Mus 3532 or #) McCurdy

Beginning techniques for basic chord construction, extended chords, and nomenclature in jazz idiom.

5343. MUSIC BUSINESS. (2 cr; prereq sr music major or grad or business student interested in music; not for CLA degree cr) McCurdy

Principles of music business; surveying specific topic areas: songwriting, publishing, copyrighting, agents, managers, contracts, the record industry, music merchandising, arts administration, and career planning and development.

5350. ORCHESTRAL REPERTOIRE. (1 cr)

Investigation of practical and performance problems in standard orchestral repertoire with regard to style and interpretation.

5361-5362-5363. VIOLIN PEDAGOGY I-II-III. (2 cr per qtr; prereq 12 cr in 1205 or 1206 or 1305 or 1306 or #)

Private and group teaching of violin students at beginning, intermediate, and advanced levels. Discussion and demonstrations of pedagogical techniques.

5364. CELLO PEDAGOGY. (2 cr; prereq 12 cr in applied cello or MuEd 3501 or #) Remenikova

Principles of cello pedagogy. Private teaching of cello students at beginning, intermediate, and advanced levels. Discussion of problems, materials, theory, and methods in cello study.

5366. GUITAR PEDAGOGY. (2 cr; prereq guitar principal or major or #) Van

Historical survey of methods and etudes from late eighteenth century to present, reflecting variety of content and approach.

5387. INSTRUMENTAL CONDUCTING. (4 cr; prereq #)

Basic conducting techniques; role of the conductor.

5388. ADVANCED INSTRUMENTAL CONDUCTING. (4 cr; prereq 5387 or #)

Score study, instrumentation, performing, performing practices.

5389. CONDUCTING WIND LITERATURE. (3 cr; prereq music grad with undergrad conducting exper or equiv or #)

Score study of standard wind repertoire and accompanying conducting techniques; emphasizes development of creative motion to achieve musical concepts of conductor.

5391. HISTORY AND ACOUSTICS OF SINGLE

REED INSTRUMENTS. (2 cr; prereq upper div standing in major instrument or #) Anderson

Clarinet and saxophone history and literature, mechanical design and development, acoustics, modern schools of performance.

5392, 5393. WOODWIND LITERATURE AND PEDAGOGY I AND II. (3 cr per qtr; prereq upper div standing in major instrument, grad or #)

5392. Study of the major teaching methods for woodwind instruments including solos and ensembles used primarily for pedagogical reasons. 5393. Study of major solo and chamber literature for five woodwind instruments.

5564. BAND ARRANGING. (4 cr; prereq 3532, 5563 or MuEd 3516 or #) Schultz

Scoring techniques for wind and percussion instruments. Scoring for band. Creative arrangements for marching or concert band.

5971w. MUSIC TRANSCRIPTION FOR WINDS.

(2 cr; prereq 3532) Baldwin

Transcription of three works with score and parts copied in ink. Principles of music manuscript and examination of examples of transcription.

Choral/Opera/Vocal Studies

(See also Applied Music)

1160f,w,s. VOICE: CLASS LESSONS. (2 cr per qtr [6 cr max])

Fundamentals of vocal production—posture, respiration, phonation, articulation.

1161-1162-1163. DICTION FOR SINGERS I-II-III.

(1 cr per qtr; prereq 1161 for 1162, 1162 for 1163, pre-music or music major or minor or #) Herzberg
Principles and practices of singing in classical vocal repertoire. Phonetic alphabet. 1161: Italian. 1162: Italian/English. 1163: English.

1164-1165-1166. DICTION FOR SINGERS IV-V-VI.

(1 cr per qtr; prereq 1164 for 1165, 1165 for 1166, pre-music or music major or minor or #) Weller
Principles and practice of singing in classical vocal repertoire. Phonetic alphabet. 1164: German. 1165: German/French. 1166: French.

1440f,w,s. ENSEMBLE. (1 cr per qtr; prereq #)

Performance of chamber music of major and minor composers; sonatas, trios, quartets, quintets, other forms. Combinations of vocal and instrumental chamber ensemble materials.

3430f,w,s. UNIVERSITY CHORUS. (1 cr; prereq #)

Sec 1—Women's Chorus: Performance of concert music for women's voices, 16th to 20th century.

Sec 2—Men's Chorus: Performance of concert music for men's voices, 16th to 20th century.

Sec 3—Concert Choir: Performance of concert music for mixed ensemble, 16-20th century.

Sec 4—Choral Union: Large oratorio chorus that performs major works for chorus with orchestra.

Sec 5—Conducting Class Ensemble: Participation in a laboratory ensemble for conducting class.

3440f,w,s. ENSEMBLE. (1 cr per qtr; prereq audition)
For description, see 1440.

Major Requirements and Course Descriptions

3741. VOCAL REPERTOIRE SURVEY. (2 cr per qtr; prereq upper div music major or #) Herzbeg
Survey of major vocal solo and chamber works from Classical through contemporary era. 3741: Classic through late-Romantic. 3742: Impressionists to present.

5150. BODY AWARENESS IN ACTIVITY—THE ALEXANDER TECHNIQUE FOR MUSICIANS. (2 cr; prereq music major or #)
Introduction to Alexander technique with applications to music performance. Emphasizes body/mind awareness to promote technical ease and freedom.

5280. VOCAL COACHING SEMINAR. (3 cr; prereq upper div standing for University students, audition or recommendation of the faculty)
Class coaching for art song preparation, including historical background of poetry and music, stylistic interpretation, and techniques for presentation. One-third lecture and two-thirds practicum.

5370. VOCAL PERFORMANCE LABORATORY. (2 cr per qtr; prereq upper div voice major or #) Ware
Vocal performance skills, methods, and techniques. Individual and group participation. Interpretation and dramatic expression. Song analysis. Recital programming. Career preparation and promotion.

5371f, 5372w, 5373s. DICTION FOR SINGERS. (2 cr per qtr; prereq 12 cr of 1204 or #) Weller
Principles and techniques of singing the English, Italian, German, and French languages. International Phonetic Association alphabet is used. 5371: English and Italian. 5372: German. 5373: French.

5375. VOCAL PEDAGOGY I. (4 cr; prereq upper div voice major or #) Ware
Basics of vocal production: anatomy and physiology of the vocal mechanism. Overview of teaching the child, adolescent, and maturing/aging voice: methods and techniques for both individual and group voice instruction. Observation and participation in class voice as assistant to instructor.

5376. VOCAL PEDAGOGY II. (4 cr; sr voice major, 5375 or #) Ware
Advanced study of the anatomy and physiology of the vocal mechanism. Survey of historical, comparative vocal methods and techniques. Independent research topics. Instruction of 1-2 students.

5378su. INTERDISCIPLINARY VOICE CONFERENCE: USE AND CARE OF THE HUMAN VOICE. (1 cr)
Anatomy and physiology of the vocal mechanism. Scientific research and applications. Vocal methods and techniques. Specific thematic content for each conference.

5384-5385. CHORAL CONDUCTING. (4 cr per qtr; prereq #; offered alt yrs) Lancaster
Choral conducting—hand techniques, sound control, articulation, breath control, intonation.

5399f, w, s. PERFORMANCE IN CONDUCTING. (2 cr; prereq 5385 or 5388, #) Lancaster
Preparation and conducting, with documentation, of an ensemble program.

5450f, w, s. COLLEGIUM MUSICUM. (1 cr per qtr; prereq audition) McClary
Small ensembles of singers and instrumentalists; study and performance of early music.

5460f, w, s. NEW MUSIC ENSEMBLE. (1 cr per qtr; prereq #)
Practice and performance of recent music for various combinations of vocal and instrumental ensembles.

5470f, w, s. OPERA WORKSHOP AND ENSEMBLE. (1 cr per qtr; prereq ability to sing arias satisfactorily by audition, #) Sutton
Preparation and performance of operatic arias, choruses, and scenes. Participation in fully staged or workshop productions of music-theatre repertoire.

5480. OPERA THEATRE. (2 cr; prereq advanced ability to sing arias satisfactorily by audition, #) Sutton
Preparation and performance of a fully staged operatic production. Major involvement in singing, acting, and technical aspects of opera.

5490f, w, s. CHAMBER SINGERS. (1 cr per qtr; prereq audition) Lancaster
Mixed chorus of 16 to 20 voices. Performances each quarter.

5741, 5742. VOCAL LITERATURE. (2 cr per qtr; prereq 12 cr in 1104 or 1204 or 1304 or #)
Performance of representative songs from major and minor composers. Examination of solo art song repertoire of major national schools.

Composition/Theory

1003. INTRODUCTION TO MUSIC THEORY. (2 cr, §1001; prereq music major or #)
Fundamental concepts of music theory and notation, including key signatures, scales, rhythm, and chordal construction.

1004. INTRODUCTION TO EAR TRAINING. (2 cr, §1001; prereq music major or #)
Fundamental concepts of ear training and sight singing, with emphasis on intervals, scales, and basic rhythmic patterns.

1511w-1512s-1513f. EAR TRAINING AND SIGHT SINGING I-II-III. (1 cr per qtr; prereq for 1511: 1004 or #, §1531; prereq for 1512: 1511, §1532; prereq for 1513: 1512, §1533)
Melodic, harmonic, and rhythmic dictation; sight singing; clef reading; musicianship drills.

1531. THEORY I: FOUNDATIONS OF TONAL MUSIC. (3 cr; prereq 1003, 1151 or 1521 or #, ¶1511)

Two-part counterpoint (species approach); consonance and dissonance; melodic contours; review of music fundamentals.

1532. THEORY II: DIATONIC TONALITY. (3 cr; prereq 1531, 1152 or 1522 or equiv, ¶1512)

Writing and analysis of basic diatonic tonal structures. Basic harmonic and contrapuntal relationships.

1533. THEORY III: HARMONY AND VOICE LEADING. (3 cr; prereq 1532, 1153 or 1523 or equiv, ¶1513)

Writing and analysis of diatonic and basic chromatic tonal structures. Binary and ternary form.

3511-3512. EAR TRAINING AND SIGHT SINGING IV-V. (1 cr per qtr; prereq 1513 for 3511, ¶3531; prereq 3511 for 3512, ¶3532)

Further development of aural skills presented in 1513.

3531. THEORY IV: CHROMATICISM. (3 cr; prereq 1533, ¶3511)

Chromatic tonal practices; expanded chordal vocabulary; voice leading and analysis.

3532. THEORY V: 20TH-CENTURY THEORY.

(3 cr; prereq 3531 or 1508, ¶3512) Cherlin
Introduction to theories of 20th-century music.

3551-3552-3553. COMPOSITION. (2 cr per qtr; prereq 3532, #) Argento, Lubet, Ultan, Zaimont

Original works in various forms. Techniques and styles of composition; development of original approaches.

5460. NEW MUSIC ENSEMBLE. (1 cr; prereq #)

Practice and performance of recent music for various combinations of vocal and instrumental ensembles.

5531. FORM AND STRUCTURE OF TONAL MUSIC. (3 cr; prereq 3531, 3511, or 1508, 1518, or placement exam) Cherlin, Damschroder

Formal and structural analysis of the sonata, rondo, variation, minuet, and other standard categories of tonal composition. Exploration of text-music relationships in song, of 19th-century character pieces, and of motivic coherence in music. Advanced harmonic and contrapuntal procedures.

5532. ANALYSIS OF 20TH-CENTURY MUSIC.

(3 cr; prereq 3532) Cherlin
Introduction to analysis of 20th-century music.

5533. MUSIC SINCE 1945. (4 cr; prereq 3532, #)

Lubet
Procedures and techniques of music composed since 1945.

5541-5542. COUNTERPOINT I and II. (4 cr per qtr; prereq 3535, 3513 or equiv for 5541, 5541 for 5542)

Lubet
5541: Practice writing in polyphonic styles of Renaissance and Baroque. 5542: Survey of 20th century polyphonic practices.

5550. COMPOSITION. (2 cr per qtr [12 cr max]; prereq 3532 or equiv, 3553 or grad, #) Argento, Ultan, Zaimont

Original works in various forms.

5561f-5562w-5563s. ORCHESTRATION. (2 cr per qtr; prereq 3532) Argento

Scoring instruments for ensemble combinations and full orchestra.

5571. SCHENKERIAN ANALYSIS FOR PERFORMERS. (4 cr; prereq 5531; offered alt yrs) Damschroder

Theory and analysis of tonal music using principles developed by Heinrich Schenker. Basic concepts, notation, and their application to excerpts and short pieces from the 18th and 19th centuries.

5572. CHROMATICISM IN LATE-TONAL MUSIC.

(4 cr; prereq 5531; offered alt yrs) Damschroder
Exploration of late-tonal chromatic practice through analysis of selected repertory, completion of written exercises (figured bass, harmonization of melodies, model composition), ear training, and keyboard drill.

5791. ELECTRONIC MUSIC: HISTORY, LITERATURE, PRINCIPLES. (4 cr) Ultan

The history of technological developments that made electronic music possible; composers and compositions reflecting an evolution of craft and connection with prevailing aesthetic values; study of the equipment, principles, and techniques used in the production of music through electronic means.

5793. ANALOG SYNTHESIS AND RECORDING TECHNIQUES. (2 cr; prereq 5791 or ¶5791) Ultan

Studio work with stereo and quadraphonic tape recorders and selected microphones directed toward development of recording skills (e.g., splicing, dubbing, preparation of tape loops, and synchronization of recording on discrete channels); exploration of analog synthesis equipment and its compositional possibilities and techniques.

5795. DIGITAL MUSIC SYNTHESIS AND PROCESSING TECHNIQUES. (2 cr; prereq 5793) Ultan

Studio work with digital synthesizers and processors, recording equipment, and computers (using a variety of different software materials) directed toward the development of skills in the use of digital equipment for composition, teaching, and performance.

5797. MUSIC AND TEXT: SEMINAR ON THE INTERRELATIONS OF TEXT AND MUSIC. (4 cr; prereq 3531, 3532) Cherlin

Interrelations of poetic imagery, form, metrics, and sonic characteristics with aspects of musical form; including repertory from 18th through 20th centuries.

Major Requirements and Course Descriptions

Keyboard Instruments

(See also Applied Music)

1051-1052-1053. PIANO CLASS FOR NONMUSIC MAJORS. (2 cr per qtr)

For nonmusic majors with little or no keyboard background. Functional skills such as reading, harmonizing, playing by ear, and improvising; basic technique and elementary repertoire.

1054-1055-1056. INTERMEDIATE CLASS PIANO FOR NONMUSIC MAJORS. (2 cr per qtr; prereq 1053 or #)

Continuation of 1051-1052-1053. Development of functional skills, such as reading, harmonizing, playing by ear, and improvising, along with technical exercises and study of intermediate repertoire.

1150. KEYBOARD SKILLS. (2 cr; prereq music major, #)

Continuation of 1151-1152-1153. Develop sightreading and other keyboard skills necessary for music therapists, vocal-choral classroom music teachers.

1151f-1152w-1153s. PIANO: CLASS LESSONS. (2 cr per qtr; prereq for 1151 music major, #) Shockley
Keyboard skills in harmonization, improvisation, sight reading, accompaniment, repertory, technique. Group learning.

1440f,w,s. ENSEMBLE. (1 cr per qtr; prereq #)
Performance of chamber music of major and minor composers: sonatas, trios, quartets, quintets, other forms. Combinations of vocal and instrumental chamber ensemble materials.

1521f-1522w-1523s. KEYBOARD HARMONY. (2 cr per qtr; prereq keyboard major, #)

Applied keyboard theory for harmonization, improvisation, playing by ear, transposition, and introductory score reading.

3440f,w,s. ENSEMBLE. (1 cr per qtr; prereq audition)
For description, see 1440.

5150. BODY AWARENESS IN ACTIVITY—THE ALEXANDER TECHNIQUE FOR MUSICIANS. (2 cr; prereq music major or #)

Introduction to Alexander technique with applications to music performance. Emphasizes body/mind awareness to promote technical ease and freedom.

5310. PIANO PEDAGOGY PRACTICUM. (1 cr per qtr [3 cr max]; coregis in 5351-5352-5353 or 5354-5355-5356 or #) Shockley

Application of principles and techniques for group or individual instruction at elementary, early intermediate, and late intermediate levels in directed teaching setting.

5351f-5352w-5353s. PIANO PEDAGOGY. (2 cr per qtr; prereq 12 cr in MusA 1201 or 1301 or #) Shockley
Demonstration and discussion of teaching techniques, methods, and materials for group and individual instruction at the elementary, early intermediate, and late intermediate levels.

5354-5355-5356. ADVANCED PIANO PEDAGOGY. (2 cr per qtr; prereq grad piano major or 5353 or #) Shockley

Demonstration and discussion of teaching techniques, methods, and materials for group and individual instruction at intermediate and early advanced levels. Offered alternate years.

5450f,w,s. COLLEGIUM MUSICUM. (1 cr per qtr; prereq audition) McClary

Small ensembles of singers and instrumentalists; study and performance of early music.

5460f,w,s. NEW MUSIC ENSEMBLE. (1 cr per qtr; prereq #) Lubet

Practice and performance of recent music for various combinations of vocal and instrumental ensembles.

5521f-5522w-5523s. ADVANCED KEYBOARD HARMONY. (2 cr per qtr; prereq 3532, sr or grad) Billmeyer
Diatonic and chromatic harmony at the piano. Realization of figured basses of the 17th and 18th centuries. Performance of choral, orchestral, and chamber music of the 17th-20th centuries, from open score, using all clefs.

5744f, 5745w, 5746s. PIANO LITERATURE. (2 cr per qtr; prereq 12 cr MusA 1201 or 1301 or #; offered alt yrs) McNab

Literature for the piano from the late baroque period to the mid-20th century.

5747, 5748, 5749. ORGAN LITERATURE. (2 cr per qtr; prereq 3606, 3532, or #) Billmeyer
Organ literature from the 14th century to present. Influence of organ design of various periods and national schools upon the literature and its performance.

Music Education/Music Therapy

1201. INTRODUCTION TO MUSIC EDUCATION. (1 cr)

Orientation to various areas and levels of music teaching through observation and school-centered experiences.

1801. INTRODUCTION TO MUSIC THERAPY. (1 cr)

Methods, materials, and applications of music therapy in various clinical settings with emphasis on field observations.

3011. TEACHING MUSIC IN THE ELEMENTARY SCHOOL. (4 cr; prereq Mus 1001, elementary education major)

For nonmusic majors; methods and materials in teaching singing, rhythm, music reading, creativity, classroom instruments, fundamentals, appreciation in K-6.

3301. TEACHING VOCAL AND GENERAL MUSIC, K-4. (4 cr; prereq music education major or #)
Methods, materials, curriculum development, principles of learning; child voice; music reading, history, and appreciation; classroom instruments, creativity, rhythm, and basic conducting techniques.

3302. TEACHING VOCAL AND GENERAL MUSIC, GRADES 5-12. (4 cr; prereq music education major or #)

Methods, materials, curriculum, principles of learning; the adolescent voice; music reading, history, and appreciation; creativity; advanced conducting techniques for middle, junior, and senior high school music.

3322. TECHNIQUES OF CLASSROOM INSTRUMENTS. (4 cr; prereq Mus 1001 or music or music education major)

Beginning and intermediate class and small group recorder instructions; methods and materials for teaching recorders, capped and uncapped Renaissance reed instruments, Studio 49 (Orff-Schulwerk) melodic and percussion instruments, and bowed, fretted instruments; factors in combining these instruments with voices and keyboard instruments.

3331. PRACTICUM: MUSIC EDUCATION. (2 cr; prereq music education major or #)

School-centered experience applying methods and materials for teaching choral and general music in public schools.

3415. CHORAL LABORATORY. (4 cr; prereq music education major or #)

Development of basic conducting skills and rehearsal techniques; methods and materials for school choral ensembles; school-based experiences; score reading and arranging.

3416. CHORAL LABORATORY II. (4 cr; prereq music education major) McCoy

Development of conducting skills and rehearsal techniques; emphasizes interpretation of choral compositions; methods and materials for choirs, glee clubs, and ensembles.

3500. STRING TECHNIQUES I. (3 cr; prereq music education major or #)

Playing experience on violin and viola; basic concepts of teaching with study of methods and materials; techniques of individual and class instruction.

3501. STRING TECHNIQUES II. (3 cr; prereq music education major or #)

Playing experience on cello and bass; basic concepts of teaching with study of methods and materials; techniques of individual and class instruction.

3503. WOODWIND TECHNIQUES. (4 cr; prereq music education major or #)

Playing experience on all woodwind instruments; basic concepts of teaching; study of methods and materials; class instruction.

3504. BRASS TECHNIQUES. (4 cr; prereq music education major or #)

Theory and technical development of instruments, elementary instruction in performing, special attention to routine class instruction.

3505. PERCUSSION TECHNIQUES. (4 cr; prereq music education major)

Playing experience on snare drum, timpani, keyboard mallet instruments, drum set; basic concepts of teaching; study of methods and materials; class instruction.

3515, 3516. INSTRUMENTAL LABORATORY I, II. (4 cr each; prereq music education major or #)

Fundamentals of conducting; emphasizes rehearsal techniques for bands and orchestras; literature and materials for school use; school-based experiences; orchestration and arranging.

3551. TEACHING INSTRUMENTAL MUSIC. (3 cr)

Supervision and administration of instrumental music; rehearsal techniques for elementary and secondary band and orchestra instruments, materials.

3650. STUDENT TEACHING IN MUSIC. (3-12 cr; prereq #)

Supervised teaching and observing in elementary, junior high, and senior high schools. Weekly seminar emphasizing classroom management, curriculum development, administration of music programs.

3800. OBSERVATION IN MUSIC THERAPY. (2 cr; prereq education student)

Elementary laboratory and field studies of music therapy and music behavior.

3801. PSYCHOLOGY OF MUSIC I. (4 cr; prereq Psy 1001, 3604 or #)

Basic study of acoustics, ear and hearing, musical systems, and psycho-socio-physiological processes involved in musical behavior.

3802. PSYCHOLOGY OF MUSIC II. (4 cr; prereq 3801)

Consideration of research methods applied in psychology of music problems through examination of selected research studies.

3803. PSYCHOLOGY OF MUSIC III. (2 cr; prereq music therapy major or #) Furman

Elementary laboratory and field studies of music therapy and music behavior.

3804. MUSIC THERAPY TECHNIQUES I. (4 cr; prereq major in music therapy)

Examination of specific techniques in quantification of study of music behavior; projects using behavioral applications.

3805-3806. MUSIC THERAPY TECHNIQUES II, III. (3 cr each; prereq 3804)

Methods and materials for music therapy in school and hospital settings; designing and implementing programs for severely and moderately handicapped children and adults.

3850. FIELD EXPERIENCES: MUSIC THERAPY.

(1 or 2 cr per qtr [max 10 cr]; prereq 3800, 3804) Pre-internship experiences in health, welfare, recreational, and educational settings.

Major Requirements and Course Descriptions

3851-3852. INTERNSHIP: MUSIC THERAPY. (6 cr each; prereq #)

Six-month resident internship in music therapy at an affiliated, approved hospital or clinic.

5111. RESEARCH IN MUSIC EDUCATION: BIBLIOGRAPHY. (3 cr)

Sources, materials, and techniques.

5112. RESEARCH IN MUSIC EDUCATION: TECHNIQUES. (3 cr)

Methods and techniques employed in investigating and reporting music education problems; review of significant research.

5115. RESEARCH IN MUSIC EDUCATION: MEASUREMENT. (3 cr; prereq #)

Current status in music testing; principles; survey of evaluative, accountability, and testing materials in music.

5211. PHILOSOPHIES OF MUSIC EDUCATION. (3 cr)

Analysis and interpretation of philosophies of music and education; objectives, trends, curriculum, and evaluation.

5214. PSYCHOLOGICAL FOUNDATIONS. (3 cr; prereq #)

Analysis and interpretation of psychologies of music and education as applied to the teaching of music.

5217. HISTORICAL FOUNDATIONS OF MUSIC EDUCATION. (3 cr; prereq #)

Analysis and interpretation of important elements in modern music teaching derived from the past.

5313. INFLUENCE OF MUSIC ON YOUTH BEHAVIOR. (3 cr) Haack

Ways music influences human behavior, with attention to effects of commercial styles on children and youth. Particularly appropriate for teachers and parents.

5432. THE ADOLESCENT SINGING VOICE. (3 cr; prereq upper div clearance in voice for voice major or 6 cr applied voice for non-voice major) McCoy

Principles of voice pedagogy in teaching adolescent singers; survey of resource materials for teacher and opportunity to apply principles and techniques in directed teaching setting.

5441. READING AND STYLISTIC INTERPRETATION OF CHORAL MUSIC. (3 cr) McCoy

Defining means of teaching singers to read and interpret music of representative periods and styles.

5504. ADVANCED STRING INSTRUMENT TECHNIQUES. (3 cr)

Research reports, lecture-demonstrations; performance by class members and school-age laboratory groups.

5603. TECHNIQUES AND MATERIALS: ORFF-SCHULWERK APPROACH. (3 cr)

Demonstration and class practice in teaching and performance skills; recorder; movement, improvisation, singing, and creation of musical forms; techniques to encourage children to create and improvise songs, instrumental music, and related bodily movement; class exercises in adapting indigenous and ethnic music material for school use.

5611. TECHNIQUES AND MATERIALS: MUSIC AND RELATED ARTS. (3 cr; prereq #)

Teaching music to reflect major developments of Western culture.

5613. TEACHING MUSIC LITERATURE. (3 cr; prereq #)

Principles, methods, and materials for teaching music history (appreciation) in grades K-12.

5615. TEACHING MUSIC READING. (3 cr; prereq #)

Objectives, materials, research, teaching procedures, and evaluation; class and individual projects; emphasis on general music class approach.

5621. SUPERVISION AND ADMINISTRATION OF SCHOOL MUSIC. (3 cr; prereq #)

Analysis and evaluation of instructional, supervisory, and administrative techniques; readings, new trends.

5631. TECHNIQUES AND MATERIALS: CHORAL CONDUCTING. (3 cr; prereq #)

Student conducting with class as performing ensemble; criteria for selecting choral and combined choral and instrumental materials; rehearsal techniques.

5633. TECHNIQUES AND MATERIALS: CHORAL ENSEMBLES. (3 cr; prereq #)

Empirical research and literature on voice development in individual, class, and choral work; individual surveys of performance practices and organization of school vocal groups; selection of vocal music.

5643. TECHNIQUES AND MATERIALS: WOODWINDS. (3 cr; prereq #)

Practical performance with lectures and discussions of research in performance techniques.

5645. TECHNIQUES AND MATERIALS: BRASS. (3 cr; prereq #)

Practical performance with lectures and discussions of research in performance techniques.

5647. TECHNIQUES AND MATERIALS: PERCUSSION. (3 cr; prereq #)

Contemporary approaches to teaching in elementary, junior high, and senior high school; emphasis on performing techniques; playing of teaching materials, solo and ensemble repertoire.

5651. TECHNIQUES AND MATERIALS: INSTRUMENTAL ENSEMBLES. (3 cr)

Survey of solo, chamber, and larger wind ensemble music and use in teaching instrumental music at pre-collegiate level.

5653. BAND ARRANGING. (3 cr, §Mus 5564; prereq #)

Current scoring techniques for wind and percussion; creative arrangements and scoring for marching or concert band.

5655. NEW DIMENSIONS IN MUSIC EDUCATION. (3 cr)

Study of contemporary music education through analysis of recent curricular trends and current issues.

5657. TECHNIQUES AND MATERIALS: INSTRUMENTAL CONDUCTING. (3 cr)

Basic conducting and rehearsal techniques for school bands and orchestras; selection of instrumental materials; organization of school ensembles, elementary and secondary.

5666. MICROCOMPUTERS IN THE MUSIC CLASSROOM. (3 cr)

Using microcomputers to enhance instruction; materials for theory, ear training, composition, electronic music; developing a data base for music libraries, instrument inventories, budgets.

5669. CONDUCTING THE MUSICAL SHOW. (3 cr)

Rehearsal techniques, coordination of singing actors and instrumental accompaniment, conducting the pit orchestra; laboratory performance and listening activities focused on traditions and trends in the musical theater.

5750. WORKSHOP: MUSIC EDUCATION. (1-12 cr [max 12 cr])

Selected topics in music education. Each offering focuses on a single topic.

5801. INFLUENCE OF MUSIC ON BEHAVIOR. (4 cr; prereq music therapy major or grad with music therapy emphasis or #) Furman

Methods and principles of behavioral sciences as they relate to practice of music therapy.

5804. MUSIC IN THERAPY. (3 cr; prereq music education or music therapy grad or #) Furman

Principles and methods related to public school, hospital, and other community mental health and education settings; observation and laboratory sessions.

5821. HISTORY OF MUSIC THERAPY. (3 cr)

Historical development of profession; outstanding persons and their contributions; incorporation of technique in increasing number of treatment populations.

5831. MUSIC FOR EXCEPTIONAL CHILDREN. (3 cr; prereq #)

Trends; methods and materials for functional program of singing, playing, rhythm, listening, and creative activities for mentally and physically handicapped and gifted pupils.

5970. INDEPENDENT STUDY. (1-4 cr; prereq education or grad student)

Independent study project organized by the student in consultation with the appropriate instructor.

Musicology/Ethnomusicology**1602w. MUSIC AND SOCIETY.** (3 cr; prereq 1003 or equiv or #) Kagan

Music and its cultural context in rural, urban, and tribal societies.

3604f-3605w-3606s. HISTORY OF WESTERN MUSIC. (5 cr per qtr; prereq for 3604: 1153 or 1523, 1532 or #; prereq for 3605: 1533 or #; prereq for 3606: 3531 or #) Staff

History of Western music in its social contexts. 3604: Antiquity through 1700. 3605: 1700-1900. 3606: 20th century.

3808. MUSIC OF EAST ASIA. (4 cr, §EAS 3808)

Kagan

Religious, courtly, operatic, chamber, and folk music of China, Japan, Korea, and Tibet. Historical developments in and cultural determinants of style, repertoire, and usage.

5182f. BAROQUE PERFORMANCE PRACTICES. (4 cr; prereq sr or grad, 3606, 3532 or #) McClary

Ornamentation, phrasing, articulation, and improvisation in music of period 1550-1759. Instruction books of the period, analysis of performance of baroque music in baroque style.

5510. EARLY MUSIC PERFORMANCE. (1 cr; prereq 3606, 3532, #) Cardamone-Jackson

Editing, arranging, and performing music before 1600 according to historically authentic practices.

5644. STUDIES IN 20TH-CENTURY AMERICAN MUSIC. (4 cr; prereq 3606, 5532 or #)

Competing concepts of musical style and purpose in 20th-century America: some stylistic and cultural bases of both "art" and "popular" music and their often uneasy interrelationships. Areas covered typically include Ives, Copland, Carter, 1920s jazz. Broadway and popular song.

5645. 18TH-CENTURY EUROPEAN MUSIC. (4 cr; prereq 3606)

Survey of vocal and instrumental genres (opera, church music, orchestral music, chamber music, and keyboard music) as they developed from the High Baroque through the Classical era.

5646. 19TH-CENTURY EUROPEAN MUSIC. (4 cr; prereq 3606 or equiv [12 cr UG cr in Mus Hist], 5532 or equiv, # for undergrads)

Survey of major composers, issues, and problems in the history of 19th-century European music: transformations of the sonata and symphony; "absolute" and "program" music, opera and "music drama"; aesthetic conceptions of music; structural and harmonic innovations.

Major Requirements and Course Descriptions

5647. 20TH-CENTURY EUROPEAN MUSIC. (4 cr; prereq 3606 or equiv [12 cr UG cr in Mus Hist], 5532 or equiv, # for undergrads)

Survey of major composers, issues, and problems in the history of 20th-century European/American music: principal trends and artistic movements; new musical aesthetics; transformations of 19th-century genres; new methods of organization.

5666. STRAVINSKY. (4 cr; prereq 12 cr in music history, 5532) Cardamone-Jackson

Changing styles and aesthetic principles of Stravinsky as seen in representative compositions and writings; contributions to artistic life in Europe and America (particularly ballet).

5667. CHAMBER MUSIC OF BEETHOVEN. (4 cr; prereq 3606, 3532; offered when feasible) McClary
Analysis of chamber compositions of Beethoven, particularly the quartets; his use of chamber sonorities and classical forms, his changes in style, and aesthetic problems.

5757, 5758. HISTORY OF THE SYMPHONY. (4 cr; prereq 3606, 3532) Staff

The symphony from its beginnings to the present. Critical examination of representative compositions, readings from relevant primary and secondary source materials. 5757: Pergolesi to Liszt. 5758: Brahms to the present.

5804. FOLK AND TRADITIONAL MUSIC: CROSS-CULTURAL SURVEY. (4 cr) Kagan

Music of the peoples of the world in topical and geographic format. Comparative study of musical styles, behavior, and concepts in varied societies and cultures. Field recordings and filmed performances.

5810. ASIAN MUSIC IN PERFORMANCE. (2 cr; prereq #) Kagan

Development of vocal and instrumental skills developed through applied training and lecture demonstrations.

5811. TRADITIONAL INDIAN MUSIC: THE SACRED AND THE PROFANE. (4 cr) Kagan

Vedic chant and regional folk music. Musical analysis and associations with belief systems, social institutions, history, and aesthetic expression. Music theory of India, notational systems, tonal and rhythmic materials, and classifications, musical forms, and performance practice.

5841. RESOURCES FOR MUSIC RESEARCH.

(2 cr; prereq 3606 or #) Probst
Introduction to the use of basic bibliographies and indexes, reference works, periodicals and historical editions; techniques for preparing an annotated bibliography.

5861. INTRODUCTION TO ETHNOMUSICOLOGY. (4 cr; prereq #; offered alt yrs) Kagan

Scope, aims, methods, and resources of research in ethnomusicology. Preliterate, folk, and high-art music of the world—style, form, usage, and function. Musical typology and comparative studies.

5863. MUSICAL INSTRUMENTS OF THE WORLD. (4 cr; offered alt yrs) Kagan

Organology; classification and comparative study of musical instruments in all cultures; history, distribution, structure, technology, acoustics. Instruments in literature, myths, iconography.

5864. AMERICAN FIDDLE TRADITIONS. (4 cr; prereq #) Kagan

The repertoire and performance practice of American fiddle music; rural and urban contexts; social, stylistic, and regional histories. Training in performance optional.

Directed Studies/Honors Courses

3101H. WRITING ABOUT MUSIC FOR A GENERAL AUDIENCE. (2 cr; prereq upper div honors status, music major or #) Lubet

Preparation for and practicum in reviewing and program annotation of musical performances, compositions, and verbal discourse about music (books, articles, and lectures) for audiences of nonmusicians. Practice in grant writing.

3970f, w.s. DIRECTED STUDIES. (1-15 cr per qtr; prereq #, Δ) Staff

Guided individual reading or study.

3995. MAJOR PROJECT. (2 cr; prereq sr, #, Δ)

5950. TOPICS IN MUSIC. (1-5 cr per qtr; exact number of cr and prereq designated for each offering)
For topics, see current *Class Schedule*.

5970. DIRECTED STUDIES. (1-5 cr; prereq #, Δ)

Applied Music (Musa)

Courses in applied music are classified according to nine modes: principal, major, secondary required, secondary elective, principal beyond requirement, major beyond requirement, minor, transfer (one quarter only), and elective. Most modes are offered at the 1xxx (introductory) and 3xxx (intermediate) levels, with the 5xxx level available only in the elective mode. A student may not register for a course in applied music until he or she has passed the required applied entrance examination. The examining committee determines the mode(s) for which a student may register. Consult the School of Music office, 100 Ferguson Hall, regarding the examination as well as the mode and level of music appropriate for fulfilling specific requirements for your degree program.

There are special fees for applied studies courses in the elective, secondary elective, principal beyond requirement, major beyond requirement, and minor modes. See the current *Class Schedule* for the fee schedule.

Credits and prerequisites for applied music courses are as follows:

1101 to 1123: (2 cr per qtr; prereq audition, Δ)

1201 to 1323: (2 or 4 cr; prereq audition, Δ)

1401 to 1723: (2 or 4 cr per qtr [12 cr max]; prereq music major, Δ)

1901 to 1923: (2 or 4 cr per qtr, 1 qtr only for transfer students; prereq music major, Δ)

3101 to 3123: (2 cr per qtr; prereq audition, Δ)

3201 to 3323: (2 or 4 cr; prereq 12 cr in corresponding 1xxx-level course, qualifying exam, Δ)

3401 to 3723: (2 or 4 cr per qtr [12 cr max]; prereq music major, Δ)

3801 to 3823: (2 cr per qtr [8 cr max]; prereq audition, Δ)

5101 to 5123: (2 cr per qtr; prereq audition, Δ)

Applied music courses in the various modes offered at the undergraduate level are listed on page 228.

Major Requirements and Course Descriptions

Applied Music						
Instrument	Principal	Major	Secondary Required	Secondary Elective	Principal Beyond Requirement	Major Beyond Requirement
Piano	1201		1401	1501	1601	1701
Harpsichord	1202		1402	1502	1602	1702
Organ	1203		1403	1503	1603	1703
Voice	1204		1404	1504	1604	1704
Violin	1205		1405	1505	1605	1705
Viola	1206		1406	1506	1606	1706
Cello	1207		1407	1507	1607	1707
Double Bass	1208		1408	1508	1608	1708
Flute	1209		1409	1509	1609	1709
Oboe	1211		1411	1511	1611	1711
Clarinet	1212		1412	1512	1612	1712
Saxophone	1213		1413	1513	1613	1713
Bassoon	1214		1414	1514	1614	1714
French Horn	1215		1415	1515	1615	1715
Trumpet	1216		1416	1516	1616	1716
Trombone	1217		1417	1517	1617	1717
Baritone	1218		1418	1518	1618	1718
Tuba	1219		1419	1519	1619	1719
Percussion	1221		1421	1521	1621	1721
Harp	1222		1422	1522	1622	1722
Guitar	1223		1423	1523	1623	1723
Piano	3201	3301	3401	3501	3601	3701
Harpsichord	3202	3302	3402	3502	3602	3702
Organ	3203	3303	3403	3503	3603	3703
Voice	3204	3304	3404	3504	3604	3704
Violin	3205	3305	3405	3505	3605	3705
Viola	3206	3306	3406	3506	3606	3706
Cello	3207	3307	3407	3507	3607	3707
Double Bass	3208	3308	3408	3508	3608	3708
Flute	3209	3309	3409	3509	3609	3709
Oboe	3211	3311	3411	3511	3611	3711
Clarinet	3212	3312	3412	3512	3612	3712
Saxophone	3213	3313	3413	3513	3613	3713
Bassoon	3214	3314	3414	3514	3614	3714
French Horn	3215	3315	3415	3515	3615	3715
Trumpet	3216	3316	3416	3516	3616	3716
Trombone	3217	3317	3417	3517	3617	3717
Baritone	3218	3318	3418	3518	3618	3718
Tuba	3219	3319	3419	3519	3619	3719
Percussion	3221	3321	3421	3521	3621	3721
Harp	3222	3322	3422	3522	3622	3722
Guitar	3223	3323	3423	3523	3623	3723
	Elective	Elective		Minor	Transfer (1 qtr only)	
Piano	1101	3101		3801		1901
Harpsichord	1102	3102		3802		1902
Organ	1103	3103		3803		1903
Voice	1104	3104		3804		1904
Violin	1105	3105		3805		1905
Viola	1106	3106		3806		1906
Cello	1107	3107		3807		1907
Double Bass	1108	3108		3808		1908
Flute	1109	3109		3809		1909
Oboe	1111	3111		3811		1911
Clarinet	1112	3112		3812		1912
Saxophone	1113	3113		3813		1913
Bassoon	1114	3114		3814		1914
French Horn	1115	3115		3815		1915
Trumpet	1116	3116		3816		1916
Trombone	1117	3117		3817		1917
Baritone	1118	3118		3818		1918
Tuba	1119	3119		3819		1919
Percussion	1121	3121		3821		1921
Harp	1122	3122		3822		1922
Guitar	1123	3123		3823		1923

College of Natural Resources

Courses appearing in the *CLA Bulletin* are approved for CLA credit. However, CLA students may take up to 28 credits of coursework offered by other colleges. The credits may be applied toward CLA degrees and in some cases may be used to fulfill general education requirements. Consult your college office adviser for a list of courses from other colleges approved for general education requirements.

Descriptions of courses offered by the College of Natural Resources can be found in the bulletin of that college.

Naval Science

See Reserve Officers' Training Corps.

Norwegian

See Scandinavian Languages and Literature.

Overseas Study

See Foreign Study.

Persian

See Institute of Languages and Literatures.

Philosophy (Phil)

Staff—*Chair*, William Hanson, 399 Ford Hall; *Director of Undergraduate Studies*, Douglas Lewis, 305 Ford Hall; *Director of Graduate Studies*, Michael Root, 251 Ford Hall

Professors: Anderson, Bowie, Caplan, Dahl, Eaton, Giere, Gunderson, Hanson, Hellman, Hopkins, Lewis, Mason, Savage, Scheman, Wallace

Associate Professors: Dolan, Owens, Peterson, Root

Assistant Professor: Waters

Adjunct Faculty: Beatty (Ecology, Evolution, and Behavior), Associate Professor), Belfiore (Classical and Near Eastern Studies, Associate Professor), Meehl (Psychology, Regents' Professor)

Philosophy is the study of the most general principles of the nature of reality, human

conduct, and the various branches of knowledge.

General Education—If you are interested in moral and social issues, you will find 1003, 1004, 3302, 3304, 3305, and 5xxx-level ethics and political philosophy courses of value. Logic (1001), scientific reasoning (1005), introduction to formal logic (3201), and philosophy of science (3601) may be of interest to science majors. Courses in aesthetics, philosophy of language, and history of philosophy may be of interest to nonspecialists.

Study Abroad—For information about study abroad, consult the department's director of undergraduate studies and Foreign Study.

B.A. Major Sequence

Required Preparatory Courses—

Background or introductory work to prepare for major program: 1001 or 5201, 1002

Major Requirements—At least nine 3xxx or 5xxx philosophy courses, including at least three 5xxx-level courses. The nine 3xxx or 5xxx courses must include 3001, 3003, and at least one of 3105, 5105, 5601, and at least one of 3311, 5311, 5312, 5321, 5415. At least four of the courses must be completed at the University. All must have grades of C or better, and no more than two may have grades of S. A major project also is required.

Minor Sequence

Minor Requirements—Minimum of 20 3xxx-5xxx cr in philosophy. Course selections must be approved by a philosophy department faculty member.

Note: Detailed descriptions of course offerings may be obtained from the department office before the beginning of each quarter.

1001f,w,s. INTRODUCTION TO LOGIC. (5 cr) Staff
Application of formal techniques for evaluating arguments.

1002f,w,s. INTRODUCTION TO PHILOSOPHY. (5 cr) Staff

Problems, principal methods, and schools of philosophy; historical and contemporary views.

Major Requirements and Course Descriptions

1002H. HONORS COURSE: INTRODUCTION TO PHILOSOPHY. (5 cr; prereq honors regis or #) Staff
For description, see 1002.

1003f,w,s. INTRODUCTION TO ETHICS. (5 cr)
Staff
Problems that arise when human beings attempt to think systematically about conduct and value.

1004. INTRODUCTION TO POLITICAL PHILOSOPHY. (5 cr) Staff
Central concepts and principal theories of political philosophy.

1005. SCIENTIFIC REASONING. (5 cr) Giere, Savage, Waters
Techniques for understanding and evaluating scientific information as presented in the popular media and in more specialized publications. Includes theories typical of the natural sciences and biology, as well as causal and statistical hypotheses typical of the social, behavioral, and biomedical sciences. Emphasis on general reasoning skills that do not require extensive training in particular sciences.

3001f, 3002w, 3003s, 3004f. GENERAL HISTORY OF WESTERN PHILOSOPHY. (5 cr per qtr) Staff
Major developments in Western philosophic thought from its beginnings among Greeks to end of 19th century. *3001*: Greek philosophy, pre-Socratics, Socrates, Plato, Aristotle. *3002*: Stoicism, Epicureanism, medieval Christian synthesis. *3003*: Modern philosophy from Descartes through Hume. *3004*: Later modern philosophy from Kant through 19th century.

3001Hf, 3002Hw, 3003Hs, 3004Hf. HONORS COURSE: GENERAL HISTORY OF WESTERN PHILOSOPHY. (5 cr per qtr; prereq honors regis or #) Staff
For description, see 3001, 3002, 3003, 3004.

3005. INTRODUCTION TO THE PHILOSOPHY OF PLATO. (4 cr) Dahl, Hopkins, Peterson
Plato's discussion of such topics as the soul, immortality, pleasure, the meanings of words, truth, knowledge, love. Methods of research on Plato.

3008. INTRODUCTION TO ARISTOTLE. (4 cr; prereq Phil 3001 or #) Dahl, Peterson
Critical examination of some central concepts in Aristotle's thought: substance, matter, form, essence, soul, cause, and the human good.

3105. INTRODUCTION TO THE THEORY OF KNOWLEDGE. (4 cr; prereq 1001 or #) Anderson, Dolan, Hellman, Savage, Waters
Theories and problems concerning evidence, belief, and knowledge.

3201. INTRODUCTION TO FORMAL LOGIC. (5 cr) Hanson
Syntax and semantics of first-order languages, algorithms and proof procedures, symbolization of natural language sentences and arguments, applications of first-order logic.

3231. INTRODUCTION TO THE PHILOSOPHY OF LANGUAGE. (4 cr; prereq 1001 or #) Anderson, Dolan, Mason, Peterson, Root, Wallace
Elementary issues concerning the nature of reference, linguistic convention, linguistic truth, translation, synonymy or the relation between language and thought.

3234. KNOWLEDGE AND GENDER. (4 cr; prereq #) Scheman
Norms governing the social construction of the knowing subject; relationship of those norms to the norms of gender. Critical consideration of the nature of objectivity and rationality and of the claims that men and women think and learn in different ways.

3302. MORAL PROBLEMS OF CONTEMPORARY SOCIETY. (5 cr) Bowie, Dahl, Dolan, Mason, Scheman, Wallace
Selected problems of current interest.

3305. MEDICAL ETHICS. (5 cr, §PubH 5623) Dolan
Moral problems confronting physicians, patients, and others concerned with medical treatment, research, and public health policy. The management of death, genetic engineering, confinement and mental illness, abortion, informed consent and truth telling in physician-patient relationships, and distributive justice in the allocation of scarce medical resources. Relationship between individual decision making and institutional policies.

3307. SOCIAL JUSTICE AND COMMUNITY SERVICE: BASIC POLITICAL VALUES. (4 cr) Wallace
Applications of concepts of justice, equality, freedom, community service, and power to current social problems. Perspectives from philosophy, history, literature, and student involvement in the community. Community service for an average of at least two hours per week.

3308. SOCIAL JUSTICE AND COMMUNITY SERVICE: POWER AND DEMOCRACY. (4 cr; prereq 3307) Wallace
Continuation of 3307. Teams develop plans to address current social problems. Community service for an average of at least two hours per week.

3311. INTRODUCTION TO ETHICAL THEORY. (4 cr) Anderson, Bowie, Dahl
Nature and justification of moral judgments and moral principles; analysis of representative moral views.

3502. INTRODUCTION TO AESTHETICS. (4 cr) Eaton, Gunderson
Development of aesthetic theories from Plato to Tolstoy.

3504. APPLIED AESTHETICS. (3 cr; prereq 3502) Eaton
Application of concepts and theories in philosophy of art and aesthetics to practical problems in contemporary society such as assessment of environmental values, artists' responsibilities, censorship.

- 3601. SCIENTIFIC THOUGHT.** (4 cr; prereq 1002, two natural science courses or completion of Group B distribution requirement) Hellman, Waters
Problems in the philosophy of science through the reading of historical and contemporary sources describing major scientific achievements and controversies.
- 3607. PHILOSOPHY OF PSYCHOLOGY.** (4 cr; prereq one course in philosophy or psychology or #) Gunderson, Savage
Major theories of mind, including the "invention" of the mind by Descartes, classical empiricism, the impact of Darwinism, Freud's theories, Gestalt psychology, behaviorism, Chomsky's rationalism, contemporary functionalism, the computer model.
- 3781. EXISTENTIALISM.** (4 cr; prereq 3003 or 3004 or #) Hopkins, Lewis, Mason
Major philosophical insights of one or more of the following existentialist thinkers: Heidegger, Sartre, Jaspers, Nietzsche, Kierkegaard, Camus, Merleau-Ponty.
- 3900H. HONORS COURSE: UNDERGRADUATE SEMINAR.** (4 cr per qtr; prereq honors regis, 8 cr 3xxx-5xxx philosophy courses) Staff
Topics of contemporary interest, varying from quarter to quarter.
- 3910. MAJOR SEMINAR.** (4 cr; prereq philosophy major or #)
Development and presentation of the major project.
- 3970. DIRECTED STUDIES.** (1-5 cr per qtr; prereq #) Staff
Guided individual reading or study.
- 3980. DIRECTED INSTRUCTION.** (1-5 cr per qtr; prereq #) Staff
- 3990. HONORS COURSE: THESIS.** (5 cr per qtr; prereq sr, honors regis in philosophy, GPA of 3.50 min)
Individual assignments carried out under faculty direction.
- 5004. SOCRATIC DIALOGUES.** (4 cr; prereq 3001 or #) Dahl, Lewis, Peterson
Early Socratic dialogues of Plato; Socratic method and paradoxes.
- 5005. PLATO.** (4 cr; prereq 3001 or #) Hopkins, Peterson
Major dialogues.
- 5008. ARISTOTLE.** (4 cr; prereq 1 qtr history of philosophy or #) Dahl, Peterson
Passages from major works.
- 5021. MEDIEVAL PHILOSOPHY.** (4 cr; prereq 3001 or 3002 or #) Hopkins
Selected topics in writings of Augustine, Anselm, Aquinas, Scotus, and Ockham.
- 5033. RATIONALISM.** (4 cr; prereq 3003 or #) Lewis
Descartes, Spinoza, and Leibniz.
- 5034. DESCARTES.** (4 cr; prereq 3003 or #) Lewis, Root
Philosophical works.
- 5035. SPINOZA.** (4 cr; prereq 3003 or #; offered when feasible) Anderson, Lewis
The Ethics.
- 5041. LOCKE.** (4 cr; prereq 3003 or #) Gunderson, Lewis
The Essay Concerning Human Understanding.
- 5042. BERKELEY.** (4 cr; prereq 3003 or #; offered when feasible) Lewis
Philosophical works.
- 5043. HUME.** (4 cr; prereq 3003 or #) Lewis
Treatise and Inquiry.
- 5046. KANT.** (4 cr; prereq 3003 or 3004 or #) Dahl, Mason
Passages from major works.
- 5054. KIERKEGAARD.** (4 cr; prereq 1 qtr history of philosophy or #; offered when feasible) Mason
Major philosophical works.
- 5055. SOCIAL AND POLITICAL PHILOSOPHY OF KARL MARX.** (4 cr; prereq 3004 or #) Hopkins, Owens
Central topics in Marx's social and political philosophy: philosophy of history, alienation, emancipation, critique of ethical and political ideas, death of the state. Marx's criticism of traditional epistemology and methodology; his epistemological and methodological assumptions.
- 5068. LATER PHILOSOPHY OF WITTGENSTEIN.** (4 cr; prereq 3003 or 5231 or #) Mason, Scheman
Philosophical Investigations.
- 5076. THOREAU.** (4 cr; prereq 4 cr in philosophy or #) Dolan
Walden and selected essays.
- 5101. METAPHYSICS.** (4 cr; prereq 1 qtr history of philosophy or #) Dolan, Waters
Philosophical theories concerning the nature of reality.
- 5105. EPISTEMOLOGY.** (4 cr; prereq 1001 or #) Dolan, Savage
Various theories of the origin, development, reliability, justification, and scope of knowledge.
- 5201. SYMBOLIC LOGIC I.** (5 cr; prereq 1001 or #) Anderson, Dahl, Dolan, Hanson
Development of a formalized language. Syntax and semantics of sentential and first-order logic. Deductive systems.
- 5202. SYMBOLIC LOGIC II.** (5 cr; prereq 5201 or #) Anderson, Dolan, Hanson
Introduction to metatheoretic proofs and methods, including proof by mathematical induction; elements of set theory; metatheorems on soundness, consistency, completeness; extensions of elementary logic.

Major Requirements and Course Descriptions

5203. SYMBOLIC LOGIC III. (4 cr; prereq 5202)

Anderson, Hanson

Elementary theory of Turing machines and recursive functions, proofs of limitative results, undecidability of first-order predicate logic, incompleteness of number theory, and undefinability of truth therein. Philosophical significance of these results.

5211. MODAL LOGIC. (4 cr; prereq 5202 or Math 5162 or #) Anderson, Hanson

Axiomatic and semantic treatment of propositional and predicate modal logics; problems of interpreting modal languages.

5221. PHILOSOPHY OF LOGIC. (4 cr; prereq 5202 or Math 5162 or #) Anderson, Hanson

Attempts to answer the question, "What is logic?" Topics include: the scope of logic; disputes about alternative logics; various theories concerning the nature of logical truth (e.g., conventionalism, the view that logical truths are contingent).

5222. PHILOSOPHY OF MATHEMATICS. (4 cr; prereq 5202 or 5xxx-level math classes) Anderson, Hanson, Hellman

Major philosophical questions arising in connection with mathematics: What is mathematics about? How do we know the mathematics we do? What is the relation between mathematics and the natural sciences?

5231. PHILOSOPHY OF LANGUAGE. (4 cr; prereq 1001 or 5201 or #) Anderson, Dolan, Mason, Peterson, Root, Wallace

Central topics. Theories of reference, linguistic truth, relation of language and thought, translation and synonymy.

5232. TOPICS IN THE PHILOSOPHY OF LANGUAGE. (4 cr; prereq 3231 or 5231 or #) Anderson, Dolan, Mason, Peterson, Root, Wallace

Detailed study of topics surveyed in 5231 or other topics central to the philosophy of language.

5302. HISTORY OF ETHICS: SELECTED CLASSICAL MORALISTS. (4 cr; prereq 1003 or 1 qtr history of philosophy or #) Dahl

Moral philosophy outside of British tradition (see 5301). Specific topics announced in *Class Schedule*.

5311. ETHICAL THEORY. (4 cr; prereq 1003 or #) Anderson, Bowie, Dahl, Mason

Representative theories on the nature and justification of moral judgments.

5312. FOUNDATIONS OF ETHICS. (4 cr; prereq 1003 or #) Dahl, Mason

Discussion of the view that evaluative judgments cannot be based on factual considerations alone, and the relation of this view to the objectivity of ethics.

5321. THEORIES OF JUSTICE. (4 cr; prereq 1003 or 1004 or 5311 or #) Bowie, Mason

Philosophical accounts of the concept and principles of justice.

5414. POLITICAL PHILOSOPHY. (4 cr; prereq 1004 or #) Bowie, Dolan, Wallace

Central concepts and principal theories of political philosophy.

5415. PHILOSOPHY OF LAW. (4 cr; prereq 1003 or 1004 or 3302 or social sciences major or #)

Analytical accounts of law and legal obligation.

5501. PRINCIPLES OF AESTHETICS. (4 cr; prereq 3502 or #) Eaton, Gunderson

Standards of evaluation; aesthetic experience; representation, meaning.

5512. PHILOSOPHY AND LITERARY CRITICISM. (4 cr; prereq 4 cr in philosophy or #) Eaton, Gunderson, Scheman

Goals and aims of literary criticism; the problems that arise in attempting to justify principles of criticism.

5521. PHILOSOPHY OF RELIGION. (4 cr, \$ReIS 5521; prereq 8 cr in philosophy) Anderson, Hopkins, Owens

Analysis of conceptual problems that arise from attempts to provide a rational justification for religious belief.

5601. PHILOSOPHY OF SCIENCE: CONFIRMATION AND THEORY TESTING. (4 cr; prereq 1001 or 3601 or #) Hanson, Savage, Waters

Principles of scientific method; contemporary approaches to scientific inference.

5602. PHILOSOPHY OF SCIENCE: THEORY AND EXPLANATION. (4 cr; prereq 3601 or 5601 or #) Giere, Hellman, Savage, Waters

Major contemporary views about the structure of scientific theories and the nature of scientific explanation.

5603. PHILOSOPHY OF SCIENCE: SCIENTIFIC CHANGE. (4 cr; prereq 3601 or 5601 or one course in history of science or #) Giere

Major contemporary views about the growth of scientific knowledge.

5604. PHILOSOPHY OF SCIENCE: DETERMINISM AND CAUSATION. (4 cr; prereq 1001 or #) Hellman

The concepts of determinism and causation and their importance for science and human affairs.

5605. PHILOSOPHY OF SCIENCE: TIME AND SPACE. (4 cr; prereq courses in philosophy or natural sciences; offered when feasible) Hellman, Savage

Major philosophical problems concerning the nature and structure of space, time, and space-time.

5606. PHILOSOPHY OF QUANTUM MECHANICS. (4 cr; prereq 3601 or Phys 3501 or Math 3142 or #) Hellman

Introduction to the problems of interpretation of ordinary (nonrelativistic) quantum mechanics. Two-slit experiment, Schrödinger cat paradox (measurement problem), Einstein-Podolsky-Rosen paradox. Leading approaches to interpretation (Copenhagen, hidden variables, universal wave function) and their connections with philosophical issues.

5607. PHILOSOPHY OF SCIENCE: PROBLEMS OF THE BIOLOGICAL SCIENCES. (4 cr; prereq one course in philosophy of science or biology; offered when feasible) Beatty, Caplan, Waters

Major philosophical questions that arise in connection with biology: structure and status of evolutionary theory, reductionism in biology, legitimacy of teleology, nature of species, relation of biology to the social sciences.

5608. PHILOSOPHY OF SCIENCE: THEORY AND MEASUREMENT. (4 cr; prereq 5201 or #) Savage

Introduction to the theory of measurement and its applications in philosophy of science, metaphysics, and epistemology.

5611. PHILOSOPHY OF THE SOCIAL SCIENCES I. (4 cr; prereq 12 cr in philosophy or social sciences or #) Root

Criteria for describing and explaining human actions; problems of objectivity, reduction, freedom.

5614. PHILOSOPHY OF SCIENCE: CURRENT ISSUES IN THE PHILOSOPHY OF PSYCHOLOGY. (4 cr; prereq Psy 3051 or 5011 or Phil 3607 or 5601 or #) Gunderson, Owens, Savage

Problems of and prospects in recent developments in psychology, cognitive science, and philosophy of mind.

5615. MINDS, BODIES, AND MACHINES. (4 cr; prereq 4 cr in philosophy or #) Gunderson, Owens

Philosophical relevance of cybernetics, artificial intelligence, and computer simulation.

5617. 20TH-CENTURY PHILOSOPHY OF SCIENCE: 1900-1950. (4 cr; prereq philosophy major or philosophy grad or #) Savage

Survey of philosophy of science in the first half of the 20th century, concentrating on logical empiricism and related doctrines, as contained in the writings of Schlick, Russell, Einstein, Poincaré, Popper, Carnap, Hempel, Reichenback, Feigl, others.

5618. 20TH-CENTURY PHILOSOPHY OF SCIENCE: 1950 TO PRESENT. (4 cr; prereq philosophy major or philosophy grad or #) Giere

Survey of philosophy of science in the second half of the 20th century.

5622. PHILOSOPHY AND FEMINIST THEORY.

(4 cr; prereq 8 cr philosophy or women's studies or #) Scheman

Examines encounters between philosophy and feminism, such as gender's influence in traditional philosophical problems and methods and the social role of the theorist and of theorizing as they relate to the politics of feminism.

5701. SURVEY OF CONTEMPORARY PHILOSOPHY. (4 cr; prereq 3003 or #) Staff

Current systematic and critical philosophies as represented by principal exponents.

5760, 5770. SELECTED TOPICS IN PHILOSOPHY.

(4 cr per qtr; prereq four 3xxx-5xxx cr philosophy or #) Staff

Philosophical problems of contemporary interest. Specific topics announced in *Class Schedule*.

5781. EXISTENTIALISM. (4 cr; prereq 3003 or 3004 or 5054 or #) Hopkins, Lewis, Mason

Writings of existentialist philosophers since Kierkegaard.

5911. PHILOSOPHY IN LITERATURE. (4 cr; prereq major or concentration in philosophy or literature or #) Eaton, Root, Scheman

Basic philosophical ideas in civilization as expressed in major works of literature.

5970. DIRECTED STUDIES. (1-5 cr per qtr; prereq #) Staff

Guided individual reading or study.

5990. DIRECTED RESEARCH. (1-5 cr per qtr; prereq #) Staff

Physics (Phys)

Institute of Technology

Staff—Head, Marvin L. Marshak, 145 Physics; *Directors of Undergraduate Studies,* Kenneth Heller and Thomas Walsh, 148 Physics; *Director of Graduate Studies,* Clayton F. Giese, 59 Physics; *Administrator,* David Holets, 145 Physics

Regents' Professor Emeritus: Nier

Professors: Bayman, Broadhurst, Campbell, Courant, Dahlberg, Dehnhard, Ellis, Gasiorowicz, Giese, Goldman, Greenlees, Halley, Heller, Hobbie, Hosotani, Huang, Johnson, Kapusta, Kellogg, Lysak, Marquit, Marshak, Mauersberger, McLerran, Olive, Pepin, Peterson, Rudaz, Ruddick, Shapiro, Shifman, Shklovskii, Stuewer, Suura, Tang, Vainshtein, Valls, Voloshin, Waddington, Walsh, Weyhmann, Zimmermann

Major Requirements and Course Descriptions

Associate Professors: Glazman, Jones, Poling

Assistant Professors: Ganz, Kakalios, Kubota

Adjunct Faculty—Dasgupta (Indian Institute of Science), deForcrand (E.T.H., Zürich), Erickson (Augsburg College), Riederer (Mayo), White (Control Data Corporation), Zabolitzky (KONTRON, Germany)

Physics is the science concerned with the fundamental properties, laws, and structures common to all forms of matter, living and nonliving. Experimental and theoretical methods of investigation are combined to formulate the mathematical relationships that describe and predict, with increasing accuracy, the behavior of the physical world.

A bachelor's degree in physics can be earned through either CLA or IT (for the IT program, see the *Institute of Technology Bulletin*). Both programs can serve as preparation for graduate school; work in industry; teaching; or professional study in law, business, or medicine. Courses for teachers may also be found in the *Extension Classes Bulletin*, the *Summer Session Bulletin*, and the *Institute of Technology Bulletin*.

Physics courses deal with a few fundamental principles that govern the universe. Topics used to illustrate these principles vary from year to year. For that reason we strongly recommend that all physics sequences be considered a single course to be taken without interruption.

Prerequisites for any physics course may be waived with permission of the department or instructor.

General Education—Courses not requiring a calculus background are 1001 with lab 1005 and 1041-1042, which include labs. Courses that use some calculus are 1104-1105-1106 with labs 1107-1108-1109. Courses firmly based on calculus are 1251-1252-1253-1254, which include labs, and 1451-1452-1453-1454, which include labs. In order to satisfy the group B laboratory requirement, students must either take courses that include a lab or complete the

additional laboratory course associated with the lecture course.

B.A. Major Sequence

Required Preparatory Courses—1251-1252-1253-1254 or 1451-1452-1453-1454; Math 1251-1252-1261 or equiv

Major Requirements—3011, 3512-3513, 3601, 3015 or 3515, Math 3251-3252-3261 or equiv, 28 additional credits of 5xxx physics or astrophysics with at least 20 cr selected from 5021-5022, 5023-5024, 5101, 5201, and 5121-5122

Major Project: experimental project (5123) or a project arranged between the student and a faculty member (5970) or in certain cases, by additional coursework in a 5xxx physics course

Majors are urged to take additional 5xxx physics, mathematics, history of science, and computer science courses. Students planning to pursue graduate work in physics are advised to take the honors requirement courses listed below as well as 5102, 5202, and at least one 5xxx mathematics course.

Minor Sequence

Minor Requirements—Completion of the required preparatory courses for the major and at least 21 additional cr of 3xxx and 5xxx courses in physics, which must include the 3515 laboratory and two courses (8-10 cr) at the 5xxx level. Up to two astronomy and astrophysics courses at the 3xxx or 5xxx level may be substituted for physics courses in the minor program. One or more courses in modern physics are recommended. Note that completion of mathematics beyond the required preparatory courses is a prerequisite for most 3xxx and 5xxx physics courses.

Honors Requirements—3512-3513, 3601, 3515; Math 3251-3252-3261 or equiv; 5021-5022, 5023-5024, 5101, 5121-5122, 5201; major project requirement as stated above

Students majoring or minoring in physics must take all of the required physics and mathematics courses on an A-F basis

(except courses which are offered S-N only) and must earn grades of at least C in all of these courses.

1001f,w,s. THE PHYSICAL WORLD. (4 cr [0 cr for IT students]; §any other physics courses; prereq 1 yr high school algebra; 4 class hrs per wk)
Fundamental laws and principles governing the physical world, discussed in context encountered in modern science and technology. Associated lab is 1005.

1005f,w,s. PHYSICS LABORATORY. (1 cr [0 cr for IT students]; prereq 1001 or ¶1001; 2 lab hrs per wk; S-N only)
Laboratory experiments offered with 1001.

1041f,w,su-1042w,s,su. INTRODUCTORY PHYSICS. (5 cr per qtr; prereq high school algebra and plane geometry; 4 lect, 1 recitation, and 2 lab hrs per wk)
Lectures, recitation, and lab sessions. Primarily for students interested in topics useful in technical areas. Fundamental principles of physics in context of the everyday world. The use of kinematic dynamics and conservation principles with quantitative and qualitative problem-solving techniques to understand phenomena of mechanics, electromagnetism, and the structure of matter.

1104f-1105w-1106s. GENERAL PHYSICS. (4 cr per qtr [0 cr for IT students]; prereq for 1104: high school calculus or Math 1142 or equiv, high school trigonometry or Math 1008; 5 lect hrs per wk)
Fundamental principles of physics, primarily for premed and biological science students. Description of motion, forces, conservation principles, fields, and the structure of matter. *1104:* Mechanics. *1105:* Fluids, heat, and electromagnetism. *1106:* Sound, light, 20th-century physics. Associated labs are 1107-1108-1109.

1107f-1108w-1109s. GENERAL PHYSICS LABORATORY. (1 cr per qtr [0 cr for IT students]; prereq 1104-1105-1106 or ¶1104-1105-1106; 2 lab hrs per wk; S-N only)
Laboratory exercises in general physics to be taken concurrently with the appropriate course, 1104-1105-1106.

1251f,w,su-1252w,s,su-1253f,s,su,-1254f,w. GENERAL PHYSICS I-II-III-IV. (4 cr per qtr, §1271-1281-1291, §1311-1321-1331-1341, §1411H-1421H-1431H-1441H or §1451H-1452H-1453H-1454H; prereq Math 1251 or ¶Math 1251 for 1251, Math 1252 or ¶Math 1252 for 1252, Math 1261 or ¶Math 1261 for 1253; 3 lect, 1 recitation, and 2 lab hrs per wk for 1251, 1252, and 1253 and 4 lect hrs per wk for 1254)
Calculus-level general physics course stressing the use of fundamental principles to solve quantitative problems. Description of motion, forces, conservation principles, fields, probability, and the structure of matter. *1251:* Mechanics. *1252:* Mechanics and waves. *1253:* Electricity and magnetism. *1254:* 20th-century physics and structure of matter.

1451Hf-1452Hw-1453Hs-1454Hf. HONORS PHYSICS I-II-III-IV. (4 cr per qtr, §1251-1252-1253-1254, §1271-1281-1291, §1311-1321-1331-1341 or §1411H-1421H-1431H-1441H; prereq selection for IT honors curriculum or consent of IT honors office; 3 lect, 1 recitation, and 2 lab hrs per wk)

Comprehensive calculus-level general physics course for honors students. Newtonian principles of mechanics, electromagnetic forces and fields, introduction to 20th-century physics, thermal and other properties of matter.

3501w. MODERN PHYSICS. (4 cr [0 cr for physics majors]; prereq 1106 or 1253 or 1291 or 1341 or 1441 or 1453; 4 lect hrs per wk)

Descriptive course. Quantum mechanics, with examples selected from atomic and molecular structure, thermal radiation, solid state physics, nuclear physics, and elementary particle physics. Associated lab is 3515.

3512w-3513s. QUANTUM PHYSICS I-II. (4 cr per qtr; prereq 1254 or 1291 or 1341 or 1441 or 1454, Math 3352 or ¶Math 3352, 3601 recommended; 4 class hrs per wk)

Introduction to quantum mechanics and selected topics from its application to atomic, molecular, condensed-matter, nuclear, elementary-particle, and statistical physics. Associated lab is 3515.

3515f,w. MODERN PHYSICS LABORATORY. (1 cr; prereq 3501 or ¶3501 or 3512 or ¶3512; 3 lab hrs per wk)

Laboratory experiments in atomic, solid state, and nuclear physics.

3601w. SPECIAL RELATIVITY. (3 cr; prereq 1253 or 1291 or 1341 or 1441 or 1453; 3 class hrs per wk)
Introduction to special relativity.

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq #, Δ)

Independent, directed study in physics in areas arranged by student and faculty member.

5021f-5022w. INTRODUCTION TO ANALYTIC MECHANICS. (4 cr per qtr; prereq Math 3261 or equiv; 4 lect hrs per wk)

Analytic course in Newtonian mechanics. Mathematics beyond prerequisites developed as required.

5023w-5024s. INTRODUCTION TO ELECTRIC AND MAGNETIC FIELDS. (4 cr per qtr; prereq Math 3261 or equiv; 4 lect hrs per wk)

Classical theory of electromagnetic fields using vector algebra and vector calculus.

5031f-5032w-5033s. TOPICS IN MATHEMATICAL PHYSICS. (4 cr per qtr; prereq two 5xxx mathematics courses; 4 lect hrs per wk)

Mathematical techniques for physics; application of mathematical methods to physical problems.

Major Requirements and Course Descriptions

5051f-5052w-5053s. CLASSICAL PHYSICS. (4 cr per qtr; prereq 5022, 5024, advanced calculus or #; 4 lect hrs per wk)

Classical mechanics, special relativity, and classical electrodynamics. Applications of advanced mathematical techniques.

5061f. COMPUTATIONAL METHODS IN THE PHYSICAL SCIENCES: I. (4 cr, §Ast 5061; prereq upper div status or grad or #; 2 lect and 6 lab hrs per wk)

Problem-solving in the physical sciences with computer programs. Numerical methods; mapping problems onto computational algorithms. Arranged laboratory at scientific computer work station.

5062w. COMPUTATIONAL METHODS IN THE PHYSICAL SCIENCES: II. (4 cr, §Ast 5062; prereq 5061 or Ast 5061 or #; 2 lect and 6 lab hrs per wk)

Advanced techniques in computer simulation; examples chosen from classical statistical mechanics, classical electrodynamics, and fluid dynamics. Computer experiments illustrating these techniques with graphics.

5101f-5102w. INTRODUCTION TO QUANTUM MECHANICS. (4 cr per qtr; prereq 3512; 4 lect hrs per wk)

Mathematical techniques of quantum mechanics. Application of the Schrödinger equation; perturbation theory; collision theory.

5121f. METHODS OF EXPERIMENTAL PHYSICS: I. (5 cr; prereq 3513 or #; knowledge of C or FORTRAN programming desirable; 3 lect and 4 lab hrs per wk)

Contemporary experimental techniques. Introduction to modern electronics and experimental strategy.

5122w. METHODS OF EXPERIMENTAL PHYSICS: II. (4 cr; prereq 5121 or #; 2 lect and 6 lab hrs per wk)

Contemporary experimental techniques: Continuation of 5121.

5123s. METHODS OF EXPERIMENTAL PHYSICS: III. (4 cr; prereq 5122 or #; 8 lab hrs per wk)

Choice of experimental projects in areas including optics, low temperature, solid state, nuclear, elementary particle, and cosmic ray physics.

5124. EXPERIMENTAL PROJECT. (Cr ar; prereq 5123, #)

Research project in an area of contemporary interest in physics. Project must be approved by faculty coordinator before registration.

5151f-5152w-5153s. QUANTUM MECHANICS. (4 cr per qtr; prereq 5102 or equiv, advanced calculus or #; 4 lect hrs per wk)

Development from first principles. Application of the Schrödinger equation, matrix representations, approximation methods.

5162. INTRODUCTION TO PLASMA PHYSICS.

(4 cr; prereq 5022, 5024 or #; offered alt yrs) Magnetohydrodynamics and properties of collisionless plasmas, applications to magnetic field of earth and sun and to plasma confinement. Transport phenomena and effects of collisions.

5201f-5202w. THERMAL AND STATISTICAL PHYSICS. (4 cr per qtr; prereq 3513 or equiv; 4 lect hrs per wk)

Applications of thermodynamics and statistical mechanics, including kinetic theory, fluctuations, transport theory, and phase transitions.

5211s. INTRODUCTORY SOLID STATE PHYSICS.

(4 cr; prereq 5101, 5202 or equiv; 4 lect hrs per wk) Properties of solids, including vibrational and electronic properties of solids and diffraction of waves in solids and electron-based structures.

5231f-5232w-5233s. INTRODUCTION TO SOLID STATE PHYSICS. (4 cr per qtr; for grads and advanced undergrads in physics or science or engineering; 4 lect hrs per wk)

Principles of solid physics for scientists and engineers not planning to specialize in the field. Crystal structure and binding; neutron and X-ray diffraction; phonons; thermal and dielectric properties of insulators; the free-electron model and band structure of metals; semiconductors. Possible topics include diamagnetism and paramagnetism; ferromagnetism and antiferromagnetism. Optical phenomena, lasers, superconductivity, surface properties, ferroelectricity.

5301s. INTRODUCTION TO NUCLEAR PHYSICS.

(4 cr; prereq 5101 or equiv; 4 lect hrs per wk) Static properties and dynamic processes of atomic nuclei. Survey for nonspecialists; first course for those intending to specialize in nuclear physics.

5371s. INTRODUCTION TO ELEMENTARY PARTICLE PHYSICS. (4 cr; prereq 5101 or equiv; 4 lect hrs per wk)

Properties and interactions of the fundamental constituents of nature. Survey for nonspecialists and those intending to specialize in elementary particle physics.

5400H. JUNIOR HONORS SEMINAR. (1 cr; prereq IT or CLA upper div honors student, #; 1½ sem hrs per wk; may be taken no more than three times)

Seminar for upper division physics majors in the honors program, designed to prepare students for senior honors thesis projects and provide guidance in choice of future careers.

5401. INTRODUCTION TO CONTEMPORARY PROBLEMS IN COSMIC RAY AND SPACE PHYSICS. (4 cr; prereq #; primarily for students specializing in other branches of physics; offered alt yrs)

Cosmic rays: characteristics, motion in the interplanetary and interstellar medium. Topics in X-ray and radio astronomy.

5410H. SENIOR HONORS PROGRAM. (1 cr; prereq IT or CLA upper div honors student, #; 1½ sem hrs per wk; may be taken no more than three times) Seminar for upper division physics majors in the honors program who are carrying out senior honors thesis projects.

5461. PHYSICS AND CHEMISTRY OF THE EARTH'S UPPER ATMOSPHERE. (4 cr; prereq general physics, calculus; 4 lect hrs per wk; offered alt yrs)

Survey of atmosphere above 15 kilometers; physics and chemistry of stratosphere, mesosphere, and thermosphere; temperature and density profiles; major and minor constituents and their distributions; aspects of pollutants; reactions and rates; global variations of constituents; the energy budget of the atmosphere.

551f. TOPICS IN PHYSICS FOR BIOLOGY AND MEDICINE: MECHANICS AND MOLECULAR PHYSICS. (5 cr; prereq general physics, calculus; offered alt yrs)

Statics (forces in bones and joints). Graphical analysis. Statistical physics (entropy, reversibility, Boltzmann factor and Nernst equation, Brownian movement, free energy). Diffusion, bulk flow, and osmosis.

552w. TOPICS IN PHYSICS FOR BIOLOGY AND MEDICINE: ELECTRICITY AND SIGNALS. (5 cr; prereq general physics, calculus; offered alt yrs) Electricity, circuits (electrocardiogram, networks, nerve conduction); transducers, amplifiers; oscillators; feedback, control; signal analysis (Fourier analysis, correlation functions, power spectra).

553s. TOPICS IN PHYSICS FOR BIOLOGY AND MEDICINE: LIGHT, ATOMS, AND NUCLEI. (5 cr; prereq general physics, calculus; offered alt yrs) Atoms (dispersion, absorption, spectra, polarized light). X-rays (production, absorption, dosimetry). Nuclei (nuclear size, mass, decay).

5801s. MODERN OPTICS. (4 cr; prereq 5024 or #; 4 lect hrs per wk; offered alt yrs) Modern theoretical and experimental optics broadly defined to include, for example, radio astronomy. Matrix methods in geometrical optics, including charged particle optics; optical detectors and noise; phenomena in intense coherent radiation, including nonlinear effects.

5805w. CONTEMPORARY OPTICS. (4 cr; prereq #; 4 lect hrs per wk) Current developments in optics. Theory of lasers and their applications in holography, nonlinear optics, etc. Nonlinear optics. Optics of anisotropic media. Theory of image formation and spatial filtering. Properties of optical detectors.

5911w. CONCEPTS IN PHYSICS. (4 cr; prereq general physics or #; 3 lect, 2 lab hrs per wk; offered alt yrs) Overview of physics with emphasis on 20th-century developments. Primarily for secondary teachers and science majors wishing a summary review of physics.

5924f. HISTORY OF 19TH-CENTURY PHYSICS. (4 cr, §HSci 5924; prereq general physics or #)

Conceptual developments in physics in the 19th century (Young, Fresnel, Oersted, Ampère, Faraday, MacCullagh, Maxwell, Hertz, Lorentz, Lavoisier, Rumford, Dalton, Mayer, Joule, Helmholtz, Carnot, Clausius, Kelvin, Boltzmann, Mach, others). Relationships to social, philosophical, and theological influences.

5925w. HISTORY OF 20TH-CENTURY PHYSICS. (4 cr, §HSci 5925; prereq general physics or #)

Conceptual developments in relativity (Michelson, Lorentz, Poincaré, Einstein, others), quantum mechanics (Planck, Einstein, Rutherford, Bohr, Sommerfeld, Ehrenfest, Pauli, Millikan, Compton, Heisenberg, de Broglie, Schrödinger, Born, others), and nuclear physics (Chadwick, Gamow, Fermi, others). Relationships to social, philosophical, and theological influences.

5950. SEMINAR. (Cr ar; primarily for beginning grads and advanced undergrads in physics, Δ; S-N only) Colloquium of the School of Physics and Astronomy.

5970. DIRECTED STUDIES. (1-5 cr; prereq #, Δ) Independent, directed study in areas arranged by the student and a faculty member.

5980. RESEARCH SEMINAR. (1 cr; primarily for beginning grads and advanced undergrad majors in physics; 1 sem hr per wk) Introduction to the research activities of the School of Physics and Astronomy.

5990. DIRECTED RESEARCH. (Cr ar; prereq 3rd yr, Δ) Problems, experimental or theoretical, of special interest to students. Written reports.

Physiology (Phsl)

Medical School

Staff—Head, Robert F. Miller, 6-255 Millard Hall; *Director of Undergraduate Studies,* Richard Poppele, 5-255 Millard Hall; *Director of Graduate Studies,* Richard Purple, 5-267 Millard Hall

Professors: Bacaner, Burkhardt, Cavert, Donaldson, Ebner, Georgopoulos, Lee, Levitt, Miller, Poppele, Purple, Soechting, Terzuolo

Associate Professors: Fohlmeister, Low, Newman, Raabe, Wangenstein

Assistant Professors: Branton, Flanders, Katz, Stish

Instructor: Bloom

Physiology aims to understand the functions of the human body by pursuing systematic

Major Requirements and Course Descriptions

studies of cells, tissues, and organisms. The emphasis is on discovering the mechanisms underlying normal and pathological functions in terms of the physical and chemical laws that govern them.

General Education—1001, for nonscience majors, is acceptable for group B.

B.A. Major Sequence

Required Preparatory Courses—One yr each of college chemistry, physics, and math (through integral calculus)

Major Requirements—3055, 3056; 20 3xxx-5xxx cr in approved courses from related fields such as math, physics, and chemistry

1001f. HUMAN PHYSIOLOGY. (4 cr; prereq high school biology, high school chemistry or #; not open to health sciences students; 3 lect, 2 lab-dem hrs per wk) Bloom

Human organ systems, normal and pathological functions, feedback regulation and control. Applications to everyday aspects of body function and health.

3051w. HUMAN PHYSIOLOGY. (5 cr; prereq 1 yr chemistry, biology; intermediate survey primarily for nursing and physical therapy students; 4 lect, 2 dem hrs per wk) Bloom

3052f, 3053 w. PRINCIPLES OF PHYSIOLOGY. (3 cr per qtr; prereq 1 yr each college chemistry, physics, math through integral calculus, Δ winter qtr only) Levitt

3055f, 3056w. PRINCIPLES OF PHYSIOLOGY. (5 cr per qtr; prereq 1 yr each college chemistry, physics, math through integral calculus, Δ winter qtr only) Levitt

3070f. NEUROPHYSIOLOGY. (2 cr; prereq biochemistry, human or mammalian anatomy; primarily for pharmacy students; begins 7th wk of qtr) Fohlmeister

3091. HONORS COURSE: READINGS IN PHYSIOLOGY. (Cr and hrs ar [may be repeated]; prereq Δ ; open to honors candidates in physiology only) Staff
Selected topics; written reviews prepared and discussed on tutorial basis.

3092. HONORS COURSE: PROBLEMS IN PHYSIOLOGY. (Cr and hrs ar [may be repeated]; prereq Δ ; open to honors candidates in physiology only) Staff
Selected laboratory problems; written reports.

3970. DIRECTED STUDIES. (Cr ar; prereq #, Δ) Staff
Guided individual reading and study on topics not covered in other courses.

5100w. SYSTEMS PHYSIOLOGY. (5 cr; prereq biochemistry, anatomy; primarily for dental or pharmacy or med tech students; 4 lect, 2 dem hrs per wk) Katz
Integration of molecular, cellular, and organ physiology to understand human body function.

5113. PROBLEMS IN PHYSIOLOGY. (Cr and hrs ar [may be repeated]; prereq Δ) Staff
Individual topics assigned for lab study, conferences and/or reading.

Plant Biology (PBio)

(formerly Botany)

College of Biological Sciences

Staff—*Head*, Irwin Rubenstein, 220 Biological Sciences Center; *Director of Undergraduate Studies*, Thomas K. Soulen, 660 Biological Sciences Center; *Director of Graduate Studies*, David D. Biesboer, 714 Biological Sciences Center

Professors: Brambl, Brenner, Carter, Cushing, Gengenbach, Hackett, Koukkari, McLaughlin, Morrow, Pratt, Rubenstein, Wetmore

Associate Professors: Biesboer, Charvat, Doebley, Gleason, Silflow, Soulen, Wick

Assistant Professors: Berman, Furnier, Gantt, May, Olszewski

Plant biologists study such varied topics as the structure, function, development, classification, evolution, worldwide distribution, and importance of plants ranging from algae and fungi to flowering plants; the molecular basis of plant evolution and development; the mechanisms through which plants convert light into chemical energy; the use of plants in the interpretation of the prehistory and history of the world; and the impact of plants on human civilizations.

A major leading to the B.S. is available through the College of Biological Sciences. See also Biology.

General Education—Courses especially appropriate for nonmajors include Biol 1103 and PBio 1009, 1012.

Minor Sequence

Required Preparatory Courses—Biol 1009, 1103 or 3012

Minor Requirements—Three courses plus one seminar to total a minimum of 15 cr in plant biology, chosen from: 3131, 3109 or 5111, 3201, 5103, 5105

The program must be approved by the director of undergraduate studies.

1009s. MINNESOTA PLANT LIFE. (4 cr; suitable for nonmajors)

Identification of the more characteristic and conspicuous Minnesota plants, including many lower forms with discussion of basic distinctions, life cycles, habitat requirements, distribution, vegetation types, and ecological relations. Lectures, demonstrations, six field trips.

1012. PLANTS USEFUL TO HUMANS. (4 cr; for majors or nonmajors)

Roles that plants play and have played in human biological and cultural development. Lectures and demonstrations.

Biol 1103. GENERAL BOTANY. (5 cr, §Biol 3012; prereq Biol 1009; students who plan to major in biology in CLA or any bioscience major in CBS should take Biol 3012)

Organization levels of plants; plant function, growth and development, reproduction. Includes lab.

Biol 3012. PLANT BIOLOGY. (5 cr, §Biol 1103, §Biol 3812; prereq Biol 1009, Chem 1052)

Plant diversity and evolution; structure and function of the plant cell and of the whole organism; growth and development of plants. Includes lab.

3109. PLANT ANATOMY. (5 cr; prereq Biol 1103 or 3012; offered alt yrs)

Structure and development of plants with special reference to vascular plants.

3131. SURVEY OF PLANT PHYSIOLOGY. (4 cr, §5131, §PIPh 3131, §PIPh 5131; prereq Biol 1103 or 3012, BioC 3031 or ¶BioC 3031 or Biol 5001)

Physiological principles underlying processes that occur in living plants, with emphasis on higher plants.

Growth and development, mineral nutrition, transport, water relations, and metabolism, emphasizing photosynthesis and nitrogen assimilation. For laboratory, see 5132.

3201. INTRODUCTORY PLANT SYSTEMATICS. (4 cr; prereq Biol 1103 or 3012)

Systematics of the flowering plants of the world. Ecology, geography, origins, and evolution of flowering plants; family characteristics; floral structure, function and evolution; pollination biology; methods of phylogenetic reconstruction; molecular evolution; taxonomic terms; methods of collection and identification. Two field trips.

3960. RESEARCH TOPICS IN PLANT BIOLOGY. (1 cr; prereq Biol 1103 or 3012; S-N only)

For undergraduates interested in plant biology. Lecture, discussion, and demonstration of faculty research interests.

5001. BASIC BOTANY. (Cr ar; prereq Biol 1008 or 1009, #, Δ)

For beginning graduate students who need to strengthen their botanical background.

5103. ALGAE, FUNGI, AND BRYOPHYTES. (5 cr; prereq Bio 1103 or 3012; offered alt yrs)

Characteristics of groups, evolutionary relationships, life cycles, comparative morphology (including ultrastructure), comparative nutrition. Laboratory emphasizes living material and isolation of algae and fungi into culture.

5105. MORPHOLOGY OF VASCULAR PLANTS.

(5 cr; prereq Biol 1103 or 3012 or #; offered alt yrs) Ferns and their allies, Gymnosperms (cycads, Ginkgo, conifers) and Angiosperms (flowering plants). Comparative morphology of vegetative and reproductive structures; life cycles, evolutionary relationships.

5107. MYCOLOGY: BASIDIOMYCETES. (4 cr; prereq PIPa 5105 or equiv or PBio 5103 or introductory microbiology or #; offered alt yrs)

Ecology, evolutionary relationships, systematics (taxonomy and nomenclature), morphology (including ultrastructure and life cycles of the basidiomycetes).

Laboratories parallel lectures, with living and preserved representatives of the Uredinales, Auriculariales, Septobasidiales, Exobasidiales, Sporobolomycetales, Ustilaginales, Tilletiales, Tremellales, Dacrymycetales, Tulasnellales, Aphylllophorales, Agaricales, and Gasteromycetes.

5109. MOLECULAR GENETICS AND BIOCHEMISTRY OF YEASTS AND FILAMENTOUS FUNGI.

(4 cr, §PIPa 5109; prereq one course each in genetics and biochemistry or #)

Chromosome structure and function, regulation of nuclear gene expression, mitochondrial gene organization and expression, membrane and organelle biogenesis, cell cycle regulation, morphogenesis, mating and reproduction, recombination and gene switching, spore formation and germination, viruses, plasmids, and toxins.

5111. PLANT CELL, TISSUE, AND ORGAN DEVELOPMENT. (5 cr; prereq Biol 1103 or 3012; offered alt yrs)

Microscopic structure of vascular plants; development in root, stem, and leaf.

5131. SURVEY OF PLANT PHYSIOLOGY. (4 cr, §3131, §PIPh 3131, §PIPh 5131; prereq Biol 1103 or 3012, BioC 3031 or ¶BioC 3031 or Biol 5001)

Physiological principles underlying processes that occur in living plants, with emphasis on higher plants. Growth and development, mineral nutrition, transport, water relations, and metabolism, emphasizing photosynthesis and nitrogen assimilation. Weekly discussion section.

5132. PLANT PHYSIOLOGY LABORATORY. (2 cr; prereq 3131 or 5131 or ¶3131 or ¶5131)

Laboratory course to accompany 3131 or 5131.

Major Requirements and Course Descriptions

5141. PLANT CELL BIOLOGY. (4 cr; prereq Biol 5004 or equiv; offered alt yrs)
Structural, functional, developmental, and biochemical aspects of cellular components and processes specific to plants. Cell walls, dictyosome activity, plastids, plant cytoskeleton, modes of plant cytokinesis, cell-cell communication, lectins and cell recognition, vacuoles, cytoplasmic streaming.

5182. PLANT METABOLISM. (3 cr, §PIPh 5182; prereq 5131 or equiv, course in biochemistry)
Plant metabolism; photosynthesis, respiration, and the synthesis of macromolecules by plants. Structure-function relations at the plant, cell, and subcellular levels. Energy flow in the plant system and regulation of plant metabolism.

5183. WATER, MINERALS, AND TRANSLOCATION. (4 cr, §PIPh 5183; prereq 5131 or equiv)
Membrane phenomena and osmotic properties of cells. Uptake, movement, and loss of water in plants; effects of external factors. Translocation of organic substances. Absorption, distribution, and function of inorganic elements.

5184. PLANT GROWTH AND DEVELOPMENT. (3 cr, §PIPh 5184; prereq 5131 or equiv)
Survey of plant growth and development ranging from germination to death, with emphasis on physiology, biochemistry, and molecular biology. Topics include developmental processes related to: mobilization of macromolecules during germination; cell division and cell extension during axis growth; photomorphogenesis; chloroplast and microbody ontogeny; flowering, fruit, and seed formation; senescence; how plant growth substances control these developments.

5186. TOPICS IN PLANT BIOCHEMISTRY. (3 cr; prereq Biol 5001 or BioC 5331; offered alt yrs)
Biochemical processes unique to plants, emphasizing structures of macromolecules involved and their reactions and regulation. Major topics: light reactions of photosynthesis, secondary metabolism, and carbohydrates. Minor topics: carbon dioxide fixation and nitrogen fixation.

5203. HERBARIUM TECHNIQUES. (1 cr; prereq 1009 or 3201 or equiv; S-N only)
A "hands-on" approach to museum curation procedures in the herbarium. Students will be exposed to all aspects of herbarium management and will assist with some curation of plant specimens.

5221. PLANT MOLECULAR EVOLUTION. (3 cr; prereq Biol 5003 or GCB 3022 or GCB 5022; offered alt yrs)
Applications of molecular genetics to the study of processes and products of evolution. Topics include phylogenetic reconstruction, chromosomal evolution, multigene families, molecular aspects of morphological change, role of transposons in evolution, DNA sequence evolution, and measures of genetic diversity.

5231. INTRODUCTION TO THE ALGAE. (5 cr; prereq 10 cr in plant biology or biology or #; offered alt yrs)
Structure, reproduction, and life histories of major algal divisions.

5960. SPECIAL TOPICS. (Cr ar; prereq #, Δ)
Treatment in depth of a specialized botanical topic.

5970. DIRECTED STUDIES. (Cr ar; prereq #, Δ)
Individual study of selected topics or problems, with emphasis on selected readings and use of scientific literature.

5990. DIRECTED RESEARCH. (Cr ar; prereq #, Δ)
Laboratory or field investigation of selected areas of research.

Courses Offered at Lake Itasca Forestry and Biological Station

3812. PLANT BIOLOGY. (5 cr, §1103, §3012; prereq 1009, Chem 1052)
Plant diversity and evolution: structure and function of plant cell and whole organism; growth and development of plants. Field trips at Itasca.

5801. PLAINS AND BOREAL FLORA. (5 cr; prereq course in taxonomy, Δ; offered when feasible)
Survey of summer flowering plants and ferns of the state with particular reference to local flora. Identification by technical keys; important plant families; field recognition of common species; habitat preferences; natural history and population biology of selected important species.

5811. FRESHWATER ALGAE. (5 cr; prereq 10 cr plant biology, biology or zoology or equiv, Δ; offered when feasible)
Morphology, systematics, and distribution of local algal flora. Collection, preservation, numeration, and culture techniques; identification of field collections using appropriate technical literature. Ecological implications of species interactions, algal associations, and indicator taxa.

5890. RESEARCH PROBLEMS. (1-5 cr per qtr; prereq #, Δ)
Individual research for undergraduates and graduates.

Polish

See Institute of Languages and Literatures.

Political Science (Pol)

Staff—Chair, Edwin Fogelman, 1414 Social Sciences Building; **Director of Undergraduate Studies,** Charles Backstrom, 1380 Social Sciences Building; **Director of Honors,** Terence Ball, 1466 Social Sciences Building;

Undergraduate Advisers, 1482 Social Sciences Building

Regents' Professor Emeritus: Turner

Regents' Professor: Sorauf

Professors: Backstrom, Ball, Benjamin, Borgida (Psychology), Boyte (Humphrey Institute), Duvall, Farr, Flanigan, Fogelman, Freeman, Gray, Holt, Hopkins, Jernberg (Humphrey Institute), Kvakik, Krislov, Kudrle (Humphrey Institute), Murphy (History), Scott, Shively, Smith, Sullivan

Associate Professors: Dietz, B. Nelson (Humphrey Institute), Nimitz, Sampson, Sylvan

Assistant Professors: Davidheiser, Disch, Jacobs, Kelliher, McGuire, Oren, Richards, Sikkink

Instructors: Legro, Moore

Political science is the study of government, politics, and political ideas. Introductory courses are concerned with general information about the American political system, the political systems of other areas in the world, the international political system, political ideas, and the principal terms and concepts of political science. Courses at 3xxx and 5xxx levels, which may be entered as soon as prerequisites are satisfied, involve deeper examination of selected fields.

Political science graduate students are not allowed to take 5xxx courses for graduate credit.

Honors Program—Qualified majors are encouraged to apply to the departmental honors program, which provides opportunities to participate in small seminars and to work closely with a faculty member on a research project. See handout from the undergraduate office.

Undergraduate Seminars, Fieldwork, Internships, and Scholarships—

Undergraduate advisers can provide detailed information about special study opportunities offered by the department, including the A. I. Johnson scholarship/internship and a yearly competition for paid internships in

the Washington, D.C., and Minnesota offices of members of Congress.

A maximum of 8 elective cr may be completed in fieldwork and internships.

Three-cr seminars in the 3x99 series include discussion of and individual research on specific topics, as listed in the quarterly *Class Schedule*. They offer close involvement with faculty members and opportunities for creative research. Enrollment in each seminar is limited to 15.

For the Nonmajor—All political science courses with the exception of honors courses are open to nonmajors on A-F or S-N grading. All 1xxx courses are suitable for students interested in an introduction to political science. Most 3xxx and 5xxx courses also are considered general in nature and many are taken by nonmajors.

Study Abroad—The department strongly urges students to incorporate an overseas study experience into their undergraduate program. Appropriate credits from such study, if planned in advance with an adviser, can be applied toward a political science major or minor. Even for students specializing in American politics, studying abroad provides an important comparative perspective. For information on options and procedures, see Foreign Study.

B.A. Major Sequence

Students seeking admission to the major must meet the following criteria: new advanced-standing students must complete two courses in political science with grades of C or better; other undergraduates must complete two of the six introductory courses in political science (1001, 1025, 1026, 1054, 1061, or 3051) with grades of C or better.

Major Requirements—1001, 3051, and one of the following: 1025, 1026, 1054, 1061; at least 39 cr in 3xxx-5xxx political science courses (including 3051), taken on A-F grading and with grades of C or better.

Of the required 3xxx-5xxx courses, at least two courses must be from the set of offerings in the political theory, comparative

Major Requirements and Course Descriptions

government and politics, or international relations subfields and at least two from the set of courses in politics and behavior, American governmental systems and processes, or public law subfields. No more than four courses taken in any one subfield will apply toward the major.

Coursework completed elsewhere can be used for credit in the major only with department approval. All majors must complete at least 20 cr of 3xxx or 5xxx political science courses on the Twin Cities campus.

Students ready to declare a major (or double major) should contact the undergraduate advising office where staff advisers, and a faculty adviser assigned at this time, will help in the selection of coursework appropriate to intellectual and career objectives.

Minor Sequence

Minor Requirements—3051, and one of the following: 1001, 1025, 1026, 1054, 1061; at least 16 cr in four related 3xxx or 5xxx political science courses from two fields.

Internships (3070, 3080), fieldwork (3751, 3352, 3353), and directed study (3970) cannot be used to fulfill minor requirements. Only one course from outside the University of Minnesota may be transferred to the minor program.

Students considering a minor should consult an undergraduate adviser about the proposed program and must obtain approval of the director of undergraduate studies.

General

1001. AMERICAN GOVERNMENT AND POLITICS. (5 cr) Gray, Jacobs, McGuire, Smith
Principles, organization, processes, functions of government, and the interplay of political forces in the United States. Attention throughout to current issues.

1001H. HONORS COURSE: AMERICAN GOVERNMENT AND POLITICS. (5 cr; open to freshmen and sophomores) Staff
Intensive introductory examination of principles, organization, processes, functions of government, and the interplay of political forces in the United States. Attention throughout to current issues. Small group discussion opportunities.

1025. WORLD POLITICS. (4 cr) Duvall, Freeman, Oren, Sampson, Sikkink, Sylvan, staff
Contemporary international relations; forms of state interaction; problems of conflict and cooperation.

1026. AMERICAN FOREIGN POLICY. (4 cr) Sampson, staff
Institutions and processes that determine American foreign policy; major developments in U.S. foreign policy since World War II; contemporary issues of U.S. policy.

1041. CONTEMPORARY POLITICAL IDEOLOGIES. (4 cr) Ball, Farr, Fogelman
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.

1054. INTRODUCTION TO COMPARATIVE POLITICS. (4 cr) Benjamin, Davidheiser, Duvall, Holt, Kelliher, Nimitz, Sikkink
Politics of democratic, communist, and Third World nations; examines the causes and consequences of different forms of political life.

1061. INTRODUCTION TO POLITICAL THOUGHT. (4 cr) Ball, Dietz, Disch, Farr, Fogelman
Central issues in politics—justice, freedom, authority, order, conflict, and revolution—are examined through readings of major texts in Western political thought: Plato's *Republic*, Machiavelli's *Prince*, Hobbes' *Leviathan*, and Marx (selections), among others.

3051. INTRODUCTION TO POLITICAL ANALYSIS. (5 cr) Farr, Fogelman, Holt, Shively, staff
Formation of political communities, political participation, policy making, compliance, legitimacy, political development, types of political systems. Empirical and normative problems. Comparisons among major countries.

3085. INTRODUCTION TO POLITICAL RESEARCH. (4 cr; prereq 3051 or #) Davidheiser, Flanagan, Richards, Shively, Sullivan, staff
The design of political research; theory construction, concept formation, problems of measurement, statistical tests for and measures of relationships; problems of inference and interpretation of findings.

3085H. HONORS COURSE: INTRODUCTION TO POLITICAL RESEARCH. (4 cr; prereq #) Staff
Methodological problems in the social sciences; research design; measurement; descriptive and inferential statistics. Extensive use of microcomputers and a wide variety of data sets and problems drawn from all of the social sciences.

Special Courses

Most 3xxx and 5xxx courses are listed under their specialized fields. "Special" courses, not assigned to these fields, are listed here.

3070. DIRECTED FIELD STUDIES. (1-4 cr per qtr; prereq #, Δ; A-F only)
Faculty-supervised research related to work in political or governmental organizations.

3080. INTERNSHIP. (4 cr per qtr [8 cr max]; prereq Δ; S-N only) Backstrom, staff
Internship with government or community organizations, arranged by the department and awarded competitively usually each spring quarter.

3109H. HONORS COURSE: SEMINAR IN POLITICAL SCIENCE RESEARCH. (4 cr; prereq political science honors program majors, 3108H, #)
Design of a research project in political science; theory construction, measurement, research methods, and data collection.

3110H. HONORS WORK IN SELECTED FIELDS. (1-6 cr per qtr [6 cr max]; prereq 3109H; open only to political science honors program majors)
Individual research and writing of departmental honors thesis.

3970. DIRECTED STUDIES. (1-6 cr per qtr; prereq #, Δ)
Guided individual reading or study.

Political Theory

3659. AMERICAN POLITICAL THOUGHT. (4 cr)
Ball, Farr, Fogelman
From colonial times to present: Puritanism; Revolution; Constitution; utopianism; sectionalism and pluralism; anarchist, socialist, populist, and syndicalist thought; social Darwinism; conservatism; political thought in law and literature.

3661. DEMOCRATIC THEORY. (4 cr; prereq 3051 or 9 cr in social sciences or #) Ball, Disch, Farr
Postulates and implications; moral foundations; democratic theory and the economic order; liberty and authority; equality; representation; participation; majority rule; critics of democracy; social science and democratic theory.

5654. DEVELOPMENT OF POLITICAL THOUGHT: ANCIENT AND MEDIEVAL (PLATO TO AQUINAS). (4 cr; 1061 recommended or 9 cr in social sciences) Ball, Dietz, staff
Thucydides; classical Greek thought; Plato and Aristotle; rise of empire and Roman thought; Augustine; Middle Ages; Aquinas.

5655. DEVELOPMENT OF POLITICAL THOUGHT: EARLY MODERN. (4 cr; 1061 recommended or 9 cr in social sciences) Ball, Dietz, Farr, staff
Renaissance; Machiavelli; More; Reformation; Luther; Calvin; liberalism; Hobbes and Locke; Enlightenment; Montesquieu; Rousseau.

5656. DEVELOPMENT OF POLITICAL THOUGHT: MODERN. (4 cr; 1061 recommended or 9 cr in social sciences) Ball, Dietz, Farr, Fogelman, staff
French Revolution and reaction; Burke; utilitarianism; Bentham; Hegel; socialism; Marx; rise of democracy; Mill; Tocqueville; selected 20th-century thinkers.

5657. DEVELOPMENT OF POLITICAL THOUGHT: CONTEMPORARY. (4 cr; 1061 recommended or 9 cr in social sciences) Dietz, Disch, Fogelman
Twentieth-century thinkers and issues: Weber, Dewey, Lenin, Arendt, Camus, Sartre, deBeauvoir, Orville, Popper, Rawls, Habermas, Foucault, liberalism, socialism, feminism, pragmatism, and communitarianism.

Comparative Government and Politics

3471. COMPARATIVE POLITICAL PARTIES AND INTEREST GROUPS. (4 cr; prereq 1054 or 3051 or #) Kvavik, Nimtz
Cross-national study of political parties and interest groups; organized expression of public and private interests in pluralist and corporatist politics; the nature of politics in single-and multi-party systems.

3477. POLITICAL DEVELOPMENT. (4 cr; prereq 1054 or 3051 or #) Duvall, Nimtz
Political processes and problems associated with economic development processes; the political economy of underdevelopment and development; problems of state building and the development of political institutions.

5410. ADVANCED TOPICS IN GOVERNMENT AND POLITICS. (4 cr; prereq 3051 or nonpolitical science grad or #) Staff
Topics of current analytic or policy importance in comparative politics. Topics vary.

5461. WESTERN EUROPEAN GOVERNMENT AND POLITICS. (5 cr; prereq 3051 or nonpolitical science grad or #) Holt, Shively
Political institutions in their social settings; power and responsibility; governmental stability; political decision making, government and economic order.

5471. GOVERNMENT AND POLITICS OF THE FORMER SOVIET UNION. (4 cr; prereq 3051 or nonpolitical science grad or #) Davidheiser, staff
The rise of Bolshevism; sources and nature of Bolshevik ideology; history and institutional character of the Soviet regime; sources of power; role of the party and functional groups; patterns of change.

5473. CHINESE GOVERNMENT AND POLITICS. (4 cr; prereq 3051 or nonpolitical science grad or #) Kelliher, staff
Traditional Chinese society; fragmentation of China and rise of the communists to power; sources and nature of communist Chinese ideology; institutional character of the Communist Party system; sources of power; role of the party and functional groups; patterns of change.

Major Requirements and Course Descriptions

5477. MIDDLE EASTERN GOVERNMENT AND POLITICS. (4 cr; prereq 3051 or nonpolitical science grad or #) Krislov, Nimtz, Sampson
Domestic politics of Turkey, Iran, selected Arab states, and Israel, with emphasis on ruling elites and linkages between regimes and societies. Other topics include secular/religious tensions, political aspects of ethnic diversity, and political effects of economic change.

5478. GOVERNMENT AND POLITICS OF AFRICAN COUNTRIES. (4 cr; prereq 3051 or nonpolitical science grad or #) Nimtz
Political institutions and behavior in sub-Saharan African countries in their social and cultural settings; class and tribal structure; parties and elections; source and nature of ideologies; economic and social policies.

5479. LATIN AMERICAN GOVERNMENT AND POLITICS. (5 cr; prereq 3051 or nonpolitical science grad or #) Sikkink
Latin American political heritage, political processes, contemporary public policy issues; problems of social, economic, and political change in selected countries.

5481. THE POLITICS OF NATIONAL ECONOMIC RELATIONS. (4 cr; prereq 3051 or nonpolitical science grad or #) Freeman
How politics shapes and is shaped by economic relations within nation-states; economic determinants of voting; political-business cycles; business and unions as interest groups; the political determinants of government spending patterns.

International Relations

3810. TOPICS IN INTERNATIONAL POLITICS AND FOREIGN POLICY. (4 cr) Staff
Analysis of selected issues in contemporary international relations. Topics vary. Examples: law of sea negotiations, international petroleum politics, limitation of arms races, creation of new international economic order.

3835. THE INTERNATIONAL SYSTEM. (4 cr) Duvall, Legro, Oren, Sampson, Sylvan
Structure of international system; balance of power, bipolar and other international systems; theories of stability, change, conflict, and cooperation.

3836. FOREIGN POLICY DECISION MAKING. (4 cr) Sampson
Theories and examples of foreign policy decision-making processes, including policy formulation and implementation. Examples drawn from various foreign policy issues.

3872. INTERNATIONAL ORGANIZATIONS AND THE ENVIRONMENT. (4 cr; prereq political science major or international relations major or 12 cr social sciences or #) Sampson
International organization as an aspect of international relations; disputes about significance of international organizations.

3899. ADVANCED SEMINAR. (4 cr; prereq jr or sr, #) Staff
Advanced analysis with supervised research and writing in areas of international relations. Topics vary from quarter to quarter. See department office for current offerings.

5323. AMERICAN DEFENSE POLICY. (4 cr; prereq 3836 or 6 cr in ROTC or nonpolitical science grad or #) Staff
Major policy issues such as American strategic theory and war capabilities; limited war theory and capabilities; arms control and disarmament. Defense policy-making process in the Executive Office, Congress, Department of Defense, military services, private sector. Implications of American defense policies for foreign and domestic policy.

5810. ADVANCED TOPICS IN INTERNATIONAL POLITICS AND FOREIGN POLICY. (1-4 cr; prereq 3835 or 3836 or nonpolitical science grad or #) Staff
Topics of current analytic or policy importance in international relations/foreign policy. Topics vary.

5877. COMPARATIVE FOREIGN POLICY. (4 cr; prereq 3836 or nonpolitical science grad or #) Sampson
Comparative analysis of foreign policies of major states; national and international determinants of foreign policy behavior.

5883. INTERNATIONAL ORGANIZATIONS. (4 cr; prereq 3835 or nonpolitical science grad or #) Duvall
International politics of cooperation in institutional arenas; decision-making in the United Nations and related agencies; organizational impact on international conflict and international economic and social relations.

5885. INTERNATIONAL PEACE AND VIOLENCE. (4 cr; prereq 3835 or nonpolitical science grad or #) Legro, Oren, staff
Normative issues surrounding international violence; causes of violence and mechanisms for creating international peace; alternative structures for limiting future violence and maintaining peace.

5889. THE POLITICS OF GLOBAL ECONOMIC RELATIONS. (4 cr; prereq 3835 or nonpolitical science grad or #) Duvall, Sylvan
Trade, aid, investment, and international monetary relations as political-economic processes; role of multinational corporations; problems of dependence and interdependence; strategic issues in East-West economic relations.

Politics and Behavior

3739. POLITICS OF ETHNIC COMMUNITIES. (4 cr; prereq 6 cr in social sciences) Nimtz
Cross-cultural study of politics of ethnic communities; emphasis on politics of black communities in the United States. Internal community politics and their local and national political systems.

3751. FIELDWORK IN POLITICS. (4 cr; prereq 1001 or equiv) Backstrom
Field study of political organizations, leadership, and campaigns. Students arrange work assignments with candidates.

3766. POLITICAL PSYCHOLOGY. (4 cr; prereq 1001 or equiv or #) Sullivan
Political learning; processes of political perception and information processing; subjectivity and political ideology; personality and political behavior; symbols and politics.

5710. ADVANCED TOPICS IN POLITICS AND BEHAVIOR. (4 cr; prereq 3051 or #) Staff
Topics of current analytic or policy importance in the politics and behavior field.

5737. AMERICAN POLITICAL PARTIES. (4 cr; prereq 1001 or #) Sorauf
The American two-party system; party influence in legislatures and executives; decline of parties and their future.

5738. AMERICAN POLITICAL CAMPAIGNS AND ELECTIONS. (4 cr; prereq 1001 or equiv or #) Backstrom
National, state, and local campaigns and elections; research in local political parties and campaigns.

5766. AMERICAN POLITICAL CULTURE AND VALUES. (4 cr; prereq 3085 or equiv or #) Sullivan
Empirical analysis of basic political values—individualism, freedom, and equality; dominant beliefs about democratic principles, postmaterialism, and capitalism; citizenship and political participation; political intolerance and patriotism; heroism and political leadership.

5767. PUBLIC OPINION AND VOTING BEHAVIOR. (5 cr; prereq 1001 or equiv or #) Flanigan, staff
Major factors influencing electoral decisions; political attitude formation and change. Data analysis laboratory required.

American Governmental Systems and Processes

3306. THE AMERICAN PRESIDENCY. (4 cr; prereq 1001 or equiv or #) Jacobs, Smith
The office and individual presidents; organizational characteristics of the Executive Office and individual qualities of decision making; relationships with Congress, the bureaucracy, parties, interest groups, media, and public opinion.

3307. THE AMERICAN BUREAUCRACY. (4 cr; prereq 1001 or equiv or #; offered through Extension) Staff
Structure of American bureaucracy; personnel, politics, and policy making; policy implementation; relationships with Congress and presidency; criticisms and proposals for reform.

3308. THE UNITED STATES CONGRESS. (4 cr; prereq 1001 or equiv or #) Backstrom, Smith
Internal organization, committee system, party leadership, norms, recruitment; legislative policy making; relationship with the president and bureaucracy; interest group, political party, and constituency influences on the congressional process.

3309. JUDICIAL PROCESS. (4 cr; prereq 1001 or equiv or #) Krislov, McGuire, Sorauf
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.

3310. TOPICS IN AMERICAN POLITICS. (4 cr per qtr; prereq 1001 or equiv or #) Staff
Topics specified in *Class Schedule*.

3331. MINNESOTA GOVERNMENT AND POLITICS. (4 cr; 1001 recommended) Backstrom
The Minnesota political system; demographic and cultural setting, political and governmental processes, contemporary policies.

3352. FIELDWORK IN THE LEGISLATURE. (4 cr; prereq 1001 or equiv or #) Backstrom
Field study of Minnesota Legislature; membership, leadership, influence, staffing, procedure, powers. Students arrange work assignments with legislators.

5303. THE AMERICAN DEMOCRACY. (4 cr; prereq 1001 or equiv or #) Flanigan, Jacobs
The American political system, its institutions and processes. Political decision making, influence, and elites. Ideals and reality of democracy in the United States.

5315. STATE GOVERNMENT AND POLITICS. (4 cr; prereq 1001 or equiv or #) Backstrom, Gray
Political institutions, political behavior, and public policies in American states; comparisons between states and between state and national political systems.

5322. AMERICAN SOCIAL POLICY. (4 cr; prereq 1001 or equiv or #) Gray, Jacobs
American government actions affecting the distribution of social benefits such as health care, education, and housing; social burdens such as taxation and regulation of social conduct. Relationships between government action and social problems; possibilities for change.

5323. AMERICAN DEFENSE POLICY. (4 cr; prereq 3836 or 6 cr in ROTC or nonpolitical science grad or #) Staff
For description, see 5323 under International Relations subheading above.

5327. LOCAL GOVERNMENT AND POLITICS. (4 cr; prereq 1001 or equiv or #) Backstrom, Scott
Development and role of American local government; forms and structures; relationships with states and the federal government; local politics and patterns of power and influence.

Major Requirements and Course Descriptions

Public Law

3323. CIVIL LIBERTIES IN AMERICA. (4 cr; prereq 1001 or equiv or #) Krislov, Sorauf, Sullivan
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.

5501. PRINCIPLES OF AMERICAN CONSTITUTION I. (5 cr; prereq 1001 or equiv) Krislov
Nature of constitutions, judicial review, organizations and powers of national government; national-state and interstate relations.

5502. PRINCIPLES OF AMERICAN CONSTITUTION II. (5 cr; prereq 1001 or equiv) Krislov
Due process; civil rights and civil liberties.

5523. THE POLITICS OF THE REGULATORY PROCESS. (4 cr; prereq 1001 or equiv or #, 5501 or 3309 or sr) Krislov
Operations of regulatory agencies considered in context of political and legal environment. Principles of federal administrative law, informal procedures, interest group activity; philosophy of regulation; politics and processes of deregulation.

Portuguese

See Spanish and Portuguese.

Psychology (Psy)

Staff—Chair, Mark Snyder, N-218 Elliott Hall; **Associate Chair,** Gail B. Peterson, N-218 Elliott Hall; **Director of Undergraduate Studies,** Paul W. Fox, N-246 Elliott Hall; **Director of Graduate Studies,** John P. Campbell, N-494 Elliott Hall; **Director of Honors,** Randy Fletcher, 255 Elliott Hall

Regents' Professor: Berscheid

Professors: Borgida, Bouchard, Burkhardt, Butcher, Campbell, Dawis, Depue, Dunnette, Fox, Hansen, Iacono, Legge, Leon, Lykken, McGue, Overmier, Snyder, Tellegen, Viemeister, Weiss

Associate Professors: Ackerman, Cudeck, Fletcher, Grove, Kanfer, Kersten, Peterson

Assistant Professors: Chapman, Fleming, Frazier, Gonzales, Palace

Psychology is concerned with the behavior of organisms in terms of environmental, genetic, physiological, and social determinants and correlates.

If you are contemplating a major in psychology, consult the Undergraduate Advising Office, 105 Elliott Hall.

General Education—Courses recommended for nonmajors include 1001, 3011, 3031, 3051, 3061, 3101, 3135, 3201, and 3604. Most 3xxx-level and a number of 5xxx-level courses are considered general in nature and may be elected by nonmajors with appropriate prerequisites.

Honors Program—Qualified majors are encouraged to enter the departmental honors program. This program provides opportunities to participate in the honors seminar and to work closely with faculty members on a research project.

Study Abroad—The department encourages students to incorporate overseas study into their academic programs. Such study can enhance the goals of a liberal education. With advance approval of an adviser, it is also possible to carry out independent study for psychology credit. For information on options and procedures, see Foreign Study.

B.A. Major Sequence

Required Preparatory Courses—1001, 1004-1005 (to be taken as soon as possible after 1001)

Major Requirements—At least 34 cr chosen as follows:

3801 or Stat 3011 (to be taken as soon as possible after 1001)

Two courses from 3011, 3031, 3051, 3061 or 5061, 5011, 5012-5013, 5014, 5015, 5031, 5034, 5036, 5037, 5051, 5054, 5137, 5606

Two courses from 3014, 3101, 3135 or 5135, 3201, 3604, 3617, 5136, 5138, 5141, 5202, 5204, 5205, 5206, 5207, 5501, 5701, 5702, 5703, 5704, 5705; CPsy 3303 or 5303, 3309 or 5301

Major project: 3902

Four elected 3xxx-5xxx psychology courses (a total of two from 3960, 3970, 3990 may be used)

All major courses must be taken on A-F grading except Psy 3902, which may be taken either A-F or S-N. At least four upper

division courses in psychology must be taken on the Twin Cities campus.

Psychology majors, especially those considering graduate work, are urged to elect math and natural, social, and biological science courses. Prospective graduate students also should take further work in statistics and computer programming.

Child psychology credits may not be counted toward the 28 3xxx-5xxx cr outside the major. (Double psychology-child psychology majors are not permitted.)

Minor Sequence—General Psychology

Required Preparatory Courses—1001, 3801 or Stat 3011 or equiv

Minor Requirements—Two courses from 3011, 3031, 3051, 3061 or 5061, 5011, 5012-5013, 5014, 5015, 5031, 5034, 5036, 5037, 5051, 5054, 5137, 5606; two courses from 3014, 3101, 3135 or 5135, 3201, 3604, 3617, 5136, 5138, 5141, 5202, 5204, 5205, 5206, 5207, 5501, 5701, 5702, 5703, 5704, 5705

All minor courses must be taken on A-F grading. At least two upper division courses in psychology must be taken on the Twin Cities campus.

The minor program must be approved by a psychology undergraduate adviser.

Minor Sequence—Natural/Biological Science

Required Preparatory Courses—1001, 3801 or Stat 3011 or equiv

Minor Requirements—Two courses from 3011, 5011, 5012-5013, 5014, 5015; two courses from 3031, 3051, 3061 or 5061, 5031, 5034, 5036, 5037, 5051, 5054, 5137, 5606

All minor courses must be taken A-F. At least two upper division courses in psychology must be taken on the Twin Cities campus.

The minor program must be approved by a psychology undergraduate adviser.

Minor Sequence—Social Science

Required Preparatory Courses—1001, 3801 or Stat 3011 or equiv

Minor Requirements—Two courses from 3014, 3101, 3201, 3604, 3617, 5202, 5204, 5205, 5206, 5207; one course from 3135 or 5135, 5136, 5138, 5141, 5501, 5701, 5702, 5703, 5704, 5705; one elective 3xxx- or 5xxx-level psychology course from those listed as course options in the social science minor sequence.

All minor courses must be taken A-F. At least two upper division courses in psychology must be taken on the Twin Cities campus.

The minor program must be approved by a psychology undergraduate adviser.

1001f,w,s. INTRODUCTION TO PSYCHOLOGY. (5 cr) Burkhardt, Butcher, Fox, Tellegen, Weiss, staff
Introduction to study of human behavior. Prerequisite for all advanced courses in psychology.

1001H. HONORS SEMINAR: INTRODUCTION TO PSYCHOLOGY. (1 cr; prereq ¶1001, permission of honors office) Fox, Weiss, staff
Small group discussion of a variety of current topics in psychology.

1004f,w-1005w,s†. INTRODUCTORY LABORATORY PSYCHOLOGY. (4 cr per qtr; prereq soph, 1001 or ¶1001) Fox, Peterson, Viemeister, staff
Experiments with contemporary subject matter such as sensory psychology, psychophysics, perception, motivation, verbal behavior, animal and human learning, problem solving, and psychological measurement.

1011w,s. CAREER DECISION MAKING. (2 cr; prereq fr or soph or others by consent of instructor; cannot be applied toward any CLA degree) Staff
Helps CLA students identify their interests, values, skills, and personality with regard to career options. Individual and group projects on possible vocations. Meetings with instructor augment class sessions.

3011f. INTRODUCTION TO PSYCHOLOGY OF LEARNING. (4 cr; prereq 1001) Peterson
Basic methods. Fundamental concepts and principles governing the learning process.

3014w. INTRODUCTION TO APPLIED PSYCHOLOGY. (4 cr; prereq 1001; offered through Extension)
History and survey of professional applications of psychology in work, school, and community settings.

Major Requirements and Course Descriptions

3031f. SENSATION AND PERCEPTION. (4 cr; prereq 1004) Burkhardt

Psychological, biological, and physical aspects of sensory experience in humans and animals. Emphasis on vision and hearing.

3051w. INTRODUCTION TO COGNITIVE PSYCHOLOGY. (4 cr; prereq 1001)

Research and theoretical concepts in study of cognitive factors in perception, memory, reading, and problem solving.

3061s. INTRODUCTION TO PHYSIOLOGICAL PSYCHOLOGY. (4 cr, §5061; prereq 1005 or Biol 1009 or #) Staff

Neural mechanisms of motivation, emotion, sleep-wakefulness cycle, learning, and communication in animals and humans.

3101f. INTRODUCTION TO PERSONALITY. (4 cr, §5101; prereq 1001) Tellegen

Concepts and issues in personality theory, personality research, and personality assessment.

3135f. INTRODUCTION TO INDIVIDUAL DIFFERENCES. (4 cr, §5135; prereq 3801 or equiv) Bouchard

Differential methods in the study of human behavior. Overview of the nature of psychological traits and influence of age, sex, heredity, and environment in causation of individual and group differences in ability, personality, interests, and attitudes.

3201w. INTRODUCTION TO SOCIAL PSYCHOLOGY. (4 cr; prereq 1001) Fleming, Gonzales

Overview of theories and research in social psychology with emphasis on attitudes and persuasion, social judgment, group behavior, the self, aggression, stereotyping, and applications.

3604f,s. INTRODUCTION TO ABNORMAL PSYCHOLOGY. (4 cr, §5604H; prereq 1001) Butcher, Iacono

Abnormal psychology. Etiologies of behavioral disorders; available treatments.

3617f,s. INTRODUCTION TO CLINICAL PSYCHOLOGY. (4 cr; prereq 3604 or 5604H, 3801 or equiv; A-F only)

Historical developments and contemporary issues; relevant research and clinical trends in psychological assessment methods and prevention and intervention strategies.

3801f. INTRODUCTION TO STATISTICAL METHODS. (4 cr; prereq 1001, GC 0631 or equiv) Cudeck

Quantification in research problems in psychology. Descriptive and inferential statistics, hypothesis testing, nonparametric statistics. Examples from various areas of psychology.

3902f,w,s. MAJOR PROJECT IN PSYCHOLOGY.

(4 cr; prereq 1005, 3801, jr or sr psychology major) Staff

Seminar for completion of the undergraduate major project paper.

3960f,w,s. UNDERGRADUATE SEMINAR. (1-5 cr per qtr; prereq 1001, #) Staff

Current topics in psychology.

3970f,w,s. DIRECTED STUDIES. (1-8 cr per qtr; prereq #, Δ) Staff

Independent reading leading to written paper or oral or written examination.

3990f,w,s. DIRECTED RESEARCH. (1-8 cr per qtr; prereq #, Δ) Staff

Individual empirical research projects leading to written report.

5011f. THEORIES OF LEARNING AND COGNITION. (4 cr; prereq 3011 or #) Peterson

Learning theories and contemporary theories of information processing and cognition. Examples from human and animal research.

5012w-5013s. PSYCHOLOGY OF LEARNING. (4 cr per qtr; prereq 1005, 3011 or EEB 3111 or #, except for grads) Overmier

Classical conditioning, instrumental learning, and elementary cognitive processes. Evaluation of relevant theories. Emphasis on animal models.

5014s. PSYCHOLOGY OF HUMAN LEARNING AND MEMORY. (4 cr; prereq 1005 or 3011 or 3051 or #, except for students in honors sequence and grads) Fox

Processes and principles in human learning, memory, and cognition. Feedback, instruction and learning, cognitive processes, and theories in learning and memory.

5015. COGNITIVE PROCESSES. (4 cr; prereq 3011 or 3051 or 5014, except for students in honors sequence and grads)

Cognitive processes in human pattern recognition, attention, and memory.

5031s. PERCEPTION. (4 cr, §NSci 5031; prereq 3051 or 3031 or #) Legge

Data and principles of visual perception: color vision, object recognition, abnormal vision, physiological optics.

5034s. PSYCHOBIOLOGY OF VISION. (4 cr, §NSci 5034; prereq 3031 or #) Burkhardt

Analysis of the properties and biological bases of sensory perception in humans and animals. Emphasis on color vision, visual sensitivity and adaptation, and nerve cell circuits of eye and brain.

5036. VISION: COMPUTATIONAL THEORY TO NEURAL SYSTEMS. (4 cr; prereq 3031, Math 3211, CSci 3104, or #) Kersten

Applications of psychology, neuroscience and computer science to understanding the design principles underlying visual perception. Comparisons of biological and physical processing of images with respect to image formation, encoding, filtering, scene inference, and recognition.

5037w. PSYCHOLOGY OF HEARING. (4 cr; prereq 3031 or #) Viemeister

Biological and physical aspects of hearing, auditory psychophysics, theories and models of hearing, perception of complex sounds including music and speech, and clinical and other applications.

5051s. PSYCHOLOGY OF HUMAN-MACHINE INTERACTION. (4 cr; prereq 3051 or 3031 or #) Legge

Psychological perspectives on human-machine interaction and factors that limit performance. Cognitive and perceptual aspects of computer use, telepresence, and design and evaluation of sensory aids.

5054w. PSYCHOLOGY OF LANGUAGE. (4 cr; prereq 3011, except for students in honors sequence and grads) Fletcher

Theories and experimental evidence in past and present conceptions of psychology of language.

5061f. FUNDAMENTALS OF BIOLOGICAL PSYCHOLOGY. (4 cr, §3061; prereq 1001) Chapman

Physiological and neuroanatomical mechanisms underlying behavior of animals. Neural basis of learning and memory, sleep, wakefulness, and attention processes. Effects of drugs on behavior.

5101w. PERSONALITY. (4 cr, §3101; prereq 5862 or §5862, honors candidate or grad) Tellegen

Personality theories as alternative orienting viewpoints. Trait-oriented discussion of findings and conceptual and methodological problems of contemporary personality research.

5135f. INTRODUCTION TO INDIVIDUAL DIFFERENCES. (4 cr, §3135; prereq 3801 or equiv, 5862 or #) Bouchard

For description, see 3135.

5136s. HUMAN ABILITIES. (4 cr; prereq 3135 or 5135, 5862, or equiv or #) Ackerman

Theory, methods, and applications of research in human abilities. Topics include intelligence, aptitude, achievement, specific abilities, information processing/learning and intelligence, aptitude/treatment interactions, and quantitative measurement issues.

5137f. INTRODUCTION TO BEHAVIORAL GENETICS. (4 cr; prereq 3135 or 5135 or #) McGue

Overview of application of genetic methods to the study of human and animal behavior. Emphasis on the use of genetic designs and methods to address psychologically relevant questions concerning the nature and etiology of individual differences in behavior. Examples include intelligence, schizophrenia, manic depressive illness, and alcoholism.

5138w. PSYCHOLOGY OF AGING. (4 cr; prereq 3135 or 5135, 5862 or #) McGue

Analysis of behavioral changes that occur in mid and late adulthood, from psychological, biological, and sociological perspectives. Description of methodologies appropriate for studying behavioral change and application to cognitive, personality, and mental health changes associated with aging.

5141. PSYCHOLOGY OF WOMEN. (4 cr; prereq 1001) Frazier

Survey of current theory and research regarding psychology of women and psychological sex differences. Including topics that relate uniquely to women (e.g., pregnancy) as well as sex differences in personality, abilities, and behavior.

5202s. ATTITUDES AND SOCIAL BEHAVIOR. (4 cr; prereq 3201 or #) Borgida

Survey of attitude theory, measurement, and persuasion research in social psychology. Focus on the structure, function, and formation of attitudes; relationship between attitudes and various social behaviors; basic principles of persuasion.

5204s. PSYCHOLOGY OF INTERPERSONAL RELATIONSHIPS. (4 cr; prereq 3201 or # except for students in honors sequence and grads) Berscheid

Theory and research on interpersonal relationships, focusing on dyadic interaction processes and patterns and their implications for the individual. Topics include: issues in relationship research methodology; developmental, sociobiological, and social psychological approaches to relationships; processes of relationship initiation, development, maintenance, and dissolution.

5205w. APPLIED SOCIAL PSYCHOLOGY. (4 cr; prereq 3201 or grad or #) Gonzales

Overview of field. Applications of social psychology research and theory to such areas as the criminal justice system, media, behavioral medicine, desegregation, advertising, victimology, juvenile delinquency, institutions, and energy conservation programs.

5206w. RESEARCH METHODS IN SOCIAL PSYCHOLOGY. (4 cr; prereq #) Fleming

Overview of experimental and quasi-experimental methods suitable for research in social psychology. Statistical, interpretive, operational, and ethical issues in social psychological research.

5207s. PERSONALITY AND SOCIAL BEHAVIOR. (4 cr; prereq 3201 or 3101 or # except for students in honors sequence and grads) Snyder

Psychology of personality and social behavior. Topics include: conceptual and methodological strategies for scientific study of individuals and their social worlds; applications of theory and research to issues of self, identity, and social interaction.

Major Requirements and Course Descriptions

5501s. VOCATIONAL PSYCHOLOGY. (4 cr; prereq 3801 or #) Dawis

Individual differences analysis of the work personality and work environment; vocational development and vocational choice; work adjustment; work motivation and performance; work satisfaction and satisfactoriness; psychological problems connected with work.

5604hw. ABNORMAL PSYCHOLOGY. (4 cr, §3604; prereq honors major; # for grads) Leon
Comprehensive review of psychopathological disorders. Etiology and clinical research findings emphasized.

5606f. BIOLOGY OF PERSONALITY AND PSYCHOPATHOLOGY. (4 cr; prereq 1004, 1005 or equiv, 3061 or 5061 or 5604H or #) Depue
Neurobiology of adaptive emotional-behavioral systems is defined. The manifestation of these systems in terms of personality dimensions, personality disorders, and psychopathology is explored from behavioral and biological perspectives.

5701w. PERSONNEL AND INDUSTRIAL PSYCHOLOGY. (4 cr; prereq 3801 or equiv, 8 cr psychology or #) Campbell

Principles of individual differences and psychological measurement to problems of recruiting, selecting, and appraising members of ongoing organizations. Job analysis, job behavior description, models of complex performance, performance measurement, selection and placement strategies, utility of personnel decision making procedures, minority group employment issues.

5702s. PSYCHOLOGY OF INDIVIDUAL BEHAVIOR IN ORGANIZATIONS. (4 cr; prereq 3801 or equiv, 8 cr psychology or #) Kanfer

Psychological research and methodology applied to the study of human behavior in organizations. Measurement of work-related beliefs and attitudes, interpersonal relations, effects of group processes on problem solving and decision making, organizational socialization, leadership, supervision, organizational structure and climate.

5703f. PSYCHOLOGY OF ORGANIZATIONAL TRAINING AND DEVELOPMENT. (4 cr; prereq 3801 or equiv, 8 cr psychology or #) Campbell

Theories, methods, and research pertaining to improving performance of individuals at work through learning and instruction: training-needs analysis, models of instructional design, aptitude-treatment interactions, training evaluation, knowledge structures, specific training programs.

5704f. ENGINEERING PSYCHOLOGY. (4 cr; prereq 3801 or equiv, 8 cr psychology or #) Ackerman

Survey of the capacities and limitations of humans in person-machine interactions. Topics include attention, perception, manual control, human-computer interface, human factors applications.

5705w. WORK MOTIVATION. (4 cr; prereq 3801 or equiv, 8 cr psychology or #) Kanfer

Emphasis on motivational processes and job satisfaction in organizational contexts. Motivational process theories of task behavior and performance, goal setting, turnover/withdrawal, work attitudes, and interpersonal influences.

5862f. PSYCHOLOGICAL MEASUREMENT: THEORY AND METHODS. (4 cr; prereq 3801 or equiv, honors candidate or grad or #) Weiss

Types of measurements (tests, scales, inventories) and their construction; theory and measurement of reliability and validity.

5865s. MEASUREMENT OF LATENT TRAITS.

(4 cr; prereq 5862 or #; offered even yrs) Weiss
Theory and methods for measurement of latent psychological variables using dichotomous item-response theory methodology. One-, two-, and three-parameter models. Item calibration, scoring, information, and applications to instrument construction, equating, bias, adaptive testing, and mastery testing.

5900H. HONORS SEMINAR: PSYCHOLOGY. (1 cr; prereq psychology honors major or #; S-N only) Fletcher

Contemporary issues in psychological research. Initiation of 5901 project. Advanced study and career opportunities in psychology. Special learning opportunities available to psychology honors majors.

5901Hf,w,s. HONORS PROJECT. (4-8 cr; prereq sr, #) Staff

Critical literature review or empirical study.

5960f,w,s. TOPICS IN PSYCHOLOGY. (1-5 cr per qtr; prereq 1001, #) Staff

Special classes or seminars. Topics listed in psychology office.

Public Affairs (PA)

Hubert H. Humphrey Institute of Public Affairs

Courses appearing in the *CLA Bulletin* are approved for CLA credit. However, CLA students may take up to 28 credits of coursework offered by other colleges. The credits may be applied toward CLA degrees, and in some cases may be used to fulfill general education requirements. Consult your college office adviser for a list of courses from other colleges approved for general education requirements.

Descriptions of courses offered by the Hubert H. Humphrey Institute of Public Affairs can be obtained from the institute.

School of Public Health

Courses appearing in the *CLA Bulletin* are approved for CLA credit. However, CLA students may take up to 28 credits of coursework offered by other colleges. The credits may be applied toward CLA degrees, and in some cases may be used to fulfill general education requirements. Consult your college office adviser for a list of courses from other colleges approved for general education requirements.

Descriptions of courses offered by the School of Public Health can be found in the bulletin of that school. Public health courses that can be used for the CLA major in biometry are listed in this bulletin under Biometry and may be applied toward CLA degrees.

Religious Studies (ReIS)

Staff—*Chair*, Robert Tapp, 330 Ford Hall; *Director of Undergraduate Studies*, Philip Sellew, 310 Folwell Hall; *Director of Graduate Studies*, Caesar Farah, 614 Social Sciences

Adjunct Faculty—*Professors*: Altholz (History), Anderson (Genetics and Cell Biology), Asher (Art History and South and Southwest Asian Studies), Bachrach (History), Bagley (Social and Philosophical Foundations of Education), Barker (South Asian and Middle Eastern Studies), Bormann (Speech-Communication), Delattre (American Studies), Dobbert (Social and Philosophical Foundations of Education), Farah (History), Hopkins (Philosophy), Kopf (History), Lincoln (Humanities), Southall (Afro-American and African Studies), Stavrou (History), Tapp (Humanities), Taylor (History), Tracy (History), Zahavy (Classical and Near Eastern Studies)

Associate Professors: Malandra (Classical and Near Eastern Studies), Paradise (Classical and Near Eastern Studies), Prell (American Studies), Sellew (Classical and Near Eastern Studies), Yates (American Studies)

Assistant Professor: Nicholson (Classical and Near Eastern Studies)

Religious studies is concerned both with understanding specific religious traditions within their cultural and historic contexts and with the nature of religious phenomena in general. Students who major or minor in religious studies are expected to acquire common disciplinary perspectives and to specialize in an area of individual interest.

A degree in religious studies is interdisciplinary in nature, with coursework taken in both religious studies and other departments. Courses offered by the Religious Studies Program are described below. A list of approved courses offered by other departments is published in the booklet, *Religious Studies at the University of Minnesota*, available from the religious studies adviser, 220 Johnston Hall.

Study Abroad—Study abroad may provide valuable enrichment for students pursuing a major or minor in religious studies. For information on options and procedures, see Foreign Study.

B.A. Major Sequence

Major Requirements—15 courses distributed as follows:

- A. Area and historical studies (courses from at least 2 areas)
- B. Literary and artistic perspectives on religions (1 course)
- C. Sociocultural perspectives on religions (1 course)
- D. Philosophical perspectives on religions (1 course)
- E. Advanced methodology seminar, ReIS 5890

Lists of courses approved for inclusion in groups A, B, C, and D are available in the brochure, *Religious Studies at the University of Minnesota*.

Before admission to the program, you should consult the religious studies adviser, 220 Johnston Hall, for referral to faculty members in your area of interest. The degree program must have the adviser's approval.

Minor requirements—Five courses in at least 3 of the fields

Major Requirements and Course Descriptions

3031. THE TRADITIONAL RELIGIONS OF INDIA. (4 cr, §1031, §5031) Malandra

India's pre-Islamic religious traditions, with emphasis on Hinduism and Buddhism (Theravada and Mahayana). Religion in context of history, society, ideological systems, literature, and the visual arts.

3032. RELIGIONS OF EAST ASIA. (4 cr, §1032, §EAS 1032)

Religious aspects of Confucianism, Taoism, Buddhism, and Shintoism as practiced in East Asia; Christian missions in East Asia.

3034. INTRODUCTION TO JUDAISM. (4 cr, §1034, §JwSt 1034, § JwSt 3034) Zahavy

Concepts, movements, and institutions in the development of classical Judaism and manifested in the literature and festivals of the Jewish people from Second Commonwealth times to the present.

3035. CHRISTIAN RELIGIOUS TRADITIONS.

(4 cr, §1035, §5035) Tapp

Historical structures, themes, and persons examined in Christianity's transition from minor Jewish sect to martyrdom to dominant religion to modern pluralism. In modern period, focus on problematic situations of racism, nationalism, democracy, capitalism, imperialism, war, sexism, Marxism, secularization.

3036. THE RELIGION OF ISLAM. (4 cr, §1036, §5036, §MELL 1536, §MELL 3036, §SALL 3036, §SALL 5036) Barker, Farah

Rise of Islam. Role of Muhammad, Koran, traditions; fundamentals and observances of the faith; sectarian movements; the spread of Islam into Asia and Africa; Baha'i, Black Muslims, reformist movements and change.

3037. ZOROASTRIANISM. (4 cr, §MELL 3555)

Bashiri, Malandra

Historical survey from the prophet Zarathustra to modern survivals in Iran and India.

3071. GREEK AND HELLENISTIC RELIGIONS.

(4 cr, §Clas 3071, §Clas 5071, §5071) Sellev

Greek religion of the archaic, classical, and Hellenistic periods. Eclipse of city-state and "failure of nerve." Mystery religions and impact of Eastern cults. Ancient myths and need for allegory. Ruler worship. Gnosticism. Judaism in Greek world. Dead Sea Scrolls.

3072. THE NEW TESTAMENT. (4 cr, §Clas 3072, §Clas 5072, §5072) Sellev

First-century Israel under Roman rule. Jesus of Nazareth. Earliest Christian communities. Mission to Gentiles. Paul the Apostle. Beginnings of the New Testament.

3073. ROMAN RELIGION AND EARLY CHRISTIANITY. (4 cr, §Clas 3073, §Clas 5073, §5073) Sellev

Etruscans. Republican religion. Appeal of non-Roman cults. Ruler worship. Christians in Asia Minor, Egypt, and the West. Popular piety, Christian and non-Christian. Rabbinic Judaism. Varieties of Christianity in 2nd and 3rd centuries. Influence of Greco-Roman culture on emerging church. Constantine and Julian.

3100. JUDAISM IN THE TIME OF EARLY CHRISTIANITY. (4 cr, §JwSt 3100) Zahavy

History, religion, and literature of Judaism in Palestine, the Roman world, and Parthian and Sassanian Babylonia in the 2nd through the 7th centuries. Methods for reconstructing the history of religion from primary sources and evidence.

3115. MISHNAH AND MIDRASH IN TRANSLATION. (4 cr, §JwSt 3115) Zahavy

Rabbinic writings in their original contexts and as living texts for the present. Interpretations of the Bible by early rabbis that address moral, theological, and literary problems. Jewish laws as a mirror of human culture. Knowledge of Hebrew not required.

3117. THE DEAD SEA SCROLLS. (4 cr, §ANE 3117)

Jewish sectarianism in pre-Christian period; position of Dead Sea Sect. Qumran texts in English; communal organization, modes of worship, theology, and Messiah concept as precursor to later religious developments. Knowledge of Hebrew not required.

3126. MODERN JUDAISM. (4 cr, §JwSt 3126) Zahavy

Jewish theory, religion, and ideology in the 19th and 20th centuries. American Judaism, orthodox, conservative, reform; religious and communal organizational structures. Zionism in Europe and America. Hasidism.

3196. RELIGIOUS DISCOURSES. (4 cr, §Hum 3196) Lincoln

Critical analysis of such phenomena as myth, ritual, and cosmology; the grounding of ethical and legal systems in transcendent claims; priestly and prophetic authority; religion as ideology and as practice.

3201. THE BIBLE: NARRATIVE TEXTS. (4 cr, §ANE 1001, §ANE 3001)

Literary and historical texts from: Pentateuch, Joshua, Judges, Samuel, and Kings. Readings of Bible and secondary materials on literary background of texts.

3202. THE BIBLE: PROPHECY. (4 cr, §ANE 1002, §ANE 3002)

Israelite prophets, emphasis on Amos, Hosea, Isaiah, Jeremiah, Ezekiel, and Second Isaiah. Prophetic contributions to Israelite religion, personality of prophets, politics, and prophetic reaction. Introduction to textual analysis and biblical scholarship.

3203. THE BIBLE: WISDOM, POETRY, AND APOCALYPTIC. (4 cr, §ANE 1003, §ANE 3003)

Books of Psalms, Proverbs, Job, Song of Songs, Lamentations, Ecclesiastes (Qoheleth), Characteristics of Biblical poetry. Conceptions of Israelite wisdom movement. Traits of early Jewish apocalyptic writings.

3213. THE QUR'AN AS LITERATURE. (4 cr, §Arab 3213, §MELL 3213) AshShareef

Texts and commentaries in translation. Knowledge of Arabic not required.

3251. THE MODERN STUDY OF THE OLD TESTAMENT. (4 cr, §ANE 3251) Reisman

Methods employed in the study of the Old Testament, including textual criticism, the anthropological approach, form criticism, the sociological approach, the history of religion, and the uses of archaeology in interpreting the text.

3412. HINDUISM. (4 cr, §SALL 3412, §SALL 5412;

prereq 3031 or 5031 or SALL 3411 or #) Junghare
Development of Hinduism, focusing on sectarian trends, modern religious practices, myths and rituals, pilgrimage patterns and religious festivals, and the interrelationship of Indian social structure and Hinduism.

3413. BUDDHISM. (4 cr, §SALL 3413, §SALL 5413) Junghare

Historical account of the Buddhist religion in terms of its rise, development, various schools and common philosophical concepts. Focuses on Indian Buddhism, compares it with Hinduism, and discusses its demise and revival on the Indian subcontinent.

3501. ANCIENT ISRAEL. (4 cr, §ANE 3501)

History of Israel and development of its religion from earliest times through the intertestamental period. The foundation of the Hebrew people, patriarchal period; development of the Israelite religious and legal institutions; conquest of Canaan; development of the monarchy and the united kingdom.

3502. ANCIENT ISRAEL. (4 cr, §ANE 3502)

History of Israel and development of its religion from earliest times through the intertestamental period. The divided kingdom, classical prophecy, destruction, exile, and restoration.

3505. ANCIENT ISRAEL: THE HELLENISTIC PERIOD. (4 cr, §5505, §ANE 3505, §ANE 5505)

Period of Ezra and Nehemiah, Samaritans, apocalyptic and other eschatological types; the Maccabean period; Sadducees, Pharisees, Zealots, Christians, Qumran, wisdom literature; Philo, Josephus; Jewish rights during Roman empire. Evaluation of sources for historical reliability. Knowledge of Hebrew not required.

3508. ISLAM: IRAN TO INDIA. (4 cr, §5508, §MELL 3508, §MELL 5508) Barker

Islam as a faith; formation of Perso-Islamic civilizations; historical, religious and cultural developments from the Samanids to the revolution; Islam in South Asia; configuration of Indo-Islamic heritage; Sufi orders; syncretic and revivalist movements; challenges of modernity, contemporary Islam in India and Pakistan.

3541. THE HOLOCAUST. (4 cr, §JwSt 3521)

Nazi destruction of Jewish life in Europe, 1933-45. Historical, social background of European Jewish communities. Anti-Semitism and Nazism. Ghettos under Nazi rule social and cultural organization, government. Nazi terror and destruction; Jewish resistance; historical consequences; moral and philosophical implications.

3545. ISLAMIC MYSTICISM. (4 cr)

The rise of Sufism, from asceticism to theosophical mysticism; leading historical personalities, their beliefs and preachings; relationships to Orthodox Islam and non-Muslim mystical movements; concepts and organizations; place of Sufism in modern religious trends.

3626. HUMANISMS: SCIENTIFIC AND SECULAR. (4 cr, §Hum 3626) Tapp

Recent attempts to base social philosophy on scientific theories and premises, excluding traditional religious and metaphysical commitments. Writers such as G.P. Conger, Corliss, Lamont, Julian Huxley, Paul Kurtz, Ervin Laszlo, and Oliver Reiser.

3675. COUNTERFAITHS IN CONTEMPORARY NOVELS. (4 cr, §Hum 3675) Tapp

Camus, Clarke, Heihlein, Hesse, Huxley, Kazantzakis, Sartre, Skinner, Vonnegut as embodiments of alternative faith perspectives and sensibilities that have emerged from the Western past.

3701. SCIENTIFIC STUDY OF RELIGION. (4 cr, §RelS 5701; prereq jr or sr or grad or #) Tapp

Theoretical and empirical issues in studying religious ideologies, institutions, and behaviors with techniques of social sciences.

3900. TOPICS IN JEWISH STUDIES. (4 cr, §JwSt 3900, §JwSt 5900)

Historical, religious, sociological, anthropological, and humanistic study of Judaism and the Jewish people. Approach and method of study varies with topic.

3970f,w,s. DIRECTED STUDIES. (3-5 cr per qtr; prereq Δ)

Guided individual reading or study.

5001. APPROACHES TO THE STUDY OF RELIGION. (4 cr) Staff

Religious ideas and institutions; myths, rituals, cosmologies, systems of salvation. Methods for the objective study of religion and its historical and sociocultural dimensions.

5031. THE TRADITIONAL RELIGIONS OF INDIA. (4 cr, §1031, §3031) Malandra

Meets with 3031. Additional work for graduate credit.

Major Requirements and Course Descriptions

5035. CHRISTIAN RELIGIOUS TRADITIONS.

(4 cr, §1035, §3035)

Meets with 3035. Additional work for graduate credit.

5036. THE RELIGION OF ISLAM. (4 cr, §1036, §3036, §MELL 1536, §SALL 3036, §SALL 5036)

Barker, Farah

Meets with 3036. Additional work for graduate credit.

5071. GREEK AND HELLENISTIC RELIGIONS.

(4 cr, §3071, §Clas 3071, §Clas 5071; prereq #)

Sellew

Meets with 3071. Additional work for graduate credit.

5072. THE NEW TESTAMENT. (4 cr, §3072, §Clas 3072, §Clas 5072; prereq #) Sellew

Meets with 3072. Additional work for graduate credit.

5073. ROMAN RELIGION AND EARLY CHRISTIANITY. (4 cr, §3073, §Clas 3073, §Clas 5073; prereq #) Sellew

Meets with 3073. Additional work for graduate credit.

5089. INTRODUCTION TO BIBLICAL ARCHAEOLOGY. (4 cr, §Clas 5089)

Archaeological data relevant to Jewish scriptures and New Testament; major sites in Holy Land and other areas of Mediterranean and Near East. Evidence of pottery, inscriptions, manuscripts, and coins. Excavation methods. Archaeology as tool for study of ancient religions.

5101. RELIGION AND AMERICAN CULTURE.

(4 cr) Delattre

Not a survey, but a representative profile of past and present religion in America, organized around a theme or problem.

5102. RELIGION AND AMERICAN CULTURE.

(4 cr) Delattre

Not a survey, but a representative profile of past and present religion in America, organized around a theme or problem.

5111. INTERPRETATION OF MYTH. (4 cr, §Hum

5711; prereq jr or sr or #; offered alt yrs) Lincoln
Structure and function of myths. Myth as social charter, ideological system, and literary form. Reading in classic theories of myth and primary sources from India, Iran, Mesopotamia, Greece, Africa, North and South America.

5112. INTERPRETATION OF RITUAL. (4 cr; pre-

req jr or sr or #; offered alt yrs) Lincoln
Structure and function of rituals. Ritual as symbolic communication, religious action, and technique of social restructuring. Sacrifice; initiation; funeral; sacred dance. Theoretical and primary readings.

5113. EXPERIENCES, MYSTICAL AND OTHER.

(4 cr; prereq jr or sr or #) Tapp

Cross-disciplinary and cross-cultural examination of worship, mysticism, meditation, visions, auditions, sacralizations, altered states of consciousness; inferences based on these experiences; attempts at systematic, theoretical, and social study.

5232. EARLY BUDDHISM, CASTE, AND CHAUVINISM. (4 cr, §Hum 5232; prereq jr or sr or grad or #)

Explore the polemics and intellectual-social implications of early Buddhist rejection of caste traditions of Indian religions, which opened the door to the conversion of non-Hindus and the missionary expansion of Buddhism.

5318. DARWINISM AND THE THEOLOGIANS.

(4 cr, §Hum 5318; prereq jr or sr or grad or #) Tapp

Evolutionary reconceptions of biological and cultural processes that dominated the 19th century caused problems for theologians regarding human nature, cosmic purpose, and historical processes; discourse of accommodation, rejection, and compromise.

5505. ANCIENT ISRAEL. (4 cr, §3505, §ANE 3505, §ANE 5505; prereq grad or #)

Meets with 3505. Additional work for graduate credit.

5508. ISLAM: IRAN TO INDIA. (4 cr, §3508,

§MELL 3508, §MELL 5508) Barker

Meets with 3508. Additional work for graduate credit.

5521. PHILOSOPHY OF RELIGION. (4 cr, §Phil

5521)

Grounds and sanctions of religion according to various philosophies.

5546. THEOLOGICAL AND MYSTICAL DOCTRINES OF ISLAM. (4 cr, §MELL 5546) Farah

Classical works of scholastics and mystics; jurists and philosophers; landmarks of Islam; religious beliefs and institutions. Content analysis commencing with the Qur'an and the traditions.

5701. SCIENTIFIC STUDY OF RELIGION. (4 cr,

§RelS 3701; prereq jr or sr or grad or #) Tapp

Same as RelS 3701.

5833. INDIA'S GODS AND GODDESSES. (4 cr,

§Hum 5833, §SALL 5833; prereq 1031 or Hum 1211

or equiv or jr or sr or #) Tapp

Indian history examined by following the development of the deities Krishna, Shiva, and Kali. Attention to interactions of region, gender, class in manifestations of art, drama, literature, and ideology.

5890. SEMINAR IN RELIGIOUS STUDIES. (5 un-

dergrad cr per qtr, 3 grad cr per qtr; prereq sr religious

studies major or #) Tapp

Conceptual and methodological issues in contemporary religious studies.

5960. TOPICS IN RELIGIOUS STUDIES. (4 cr per

qtr; prereq #)

Topics specified in *Class Schedule*.

5970. DIRECTED STUDIES. (3-5 cr per qtr)
Guided individual reading or study.

Reserve Officers' Training Corps (ROTC)

If you are a qualified student, you may combine work toward a degree with participation in a two- or four-year Reserve Officers' Training Corps program in aerospace studies, military science, or naval science. You earn elective credits, and, if you complete a program, qualify for a commission as an officer in one of the services. ROTC curricula provide instruction and practice in leadership skills as well as military subjects. Scholarships providing educational support for up to four years are available on a competitive basis.

To learn about the qualifications, curricula, benefits, and obligations of each service, consult the *Army-Navy-Air Force ROTC Bulletin*, or inquire at an ROTC office: Aerospace Studies, 3 Armory; Military Science, 108 Armory; Naval Science, 203 Armory.

Note: ROTC courses that are not cross-listed with CLA courses count as liberal arts courses for the CLA graduation requirement if the ROTC program is completed. If the ROTC program is not completed, they count as *non-liberal arts* credits (28 credits maximum).

Aerospace Studies (Air)

Staff—Head, Col. Larry P. Cornwell,
USAF, 3 Armory

General Military Courses

1104f. U.S. AIR FORCE. (1 cr)
The doctrine, mission, and organization of the U.S. Air Force.

1105w. AIR FORCE COMBAT COMMANDS. (1 cr)
The mission, organization, and operation of the Strategic Air Command, Space Command, and Tactical Air Command; their contributions to U.S. strategic offensive, defensive, and general purpose forces.

1106s. U.S. SUPPORT FORCES. (1 cr)
Structures and functions of Air Force support forces. Organizations that support the combat commands. Air Force interaction with the Army and Navy.

1204f. EARLY HISTORY OF AIRPOWER. (1 cr)
The beginnings of human flight. Early military attitudes toward aviation; the development of employment concepts, tactics, and strategies. Early development of air doctrines.

1205w. ALLIED AIRPOWER IN WORLD WAR II AND THE BERLIN AIRLIFT. (1 cr)
Uses of airpower in World War II. Development of an independent Air Force. Cold War strategy. Berlin airlift.

1206s. MODERN EMPLOYMENT OF AIRPOWER. (1 cr)
Effects of airpower on tactics and strategy in the modern world. The role of airpower in Korea, Cuba, Southeast Asia. Airpower advances over the past quarter century.

Professional Officer Courses

3301f. AIR FORCE COMMUNICATIONS AND LEADERSHIP. (3 cr)
Air Force writing and military briefing skills. Leadership theory and applied leadership studies.

3302w. AIR FORCE MANAGEMENT. (3 cr)
Role of officer as manager. Decision making, organizing, staffing, and controlling. Behavior processes.

3303s. AIR FORCE PROFESSIONAL KNOWLEDGE AND ETHICS. (3 cr)
Commanding, counseling, officer professional development, establishing standards, ethics in military leadership.

3401f. MILITARY IN SOCIETY. (3 cr; prereq all aerospace 33xx courses)
Role and function of the professional officer in a democratic society. Civil-military relationships. Communication skills.

3402w. FORMULATION AND IMPLEMENTATION OF U.S. DEFENSE POLICY. (3 cr; prereq all aerospace 33xx courses, 3401)
Principal requirements for maintaining adequate national security forces. Constraints affecting the formulation of U.S. defense policy. Impact of technological and international developments on strategic preparedness and the defense policy-making process.

3403s. MILITARY LAW AND SERVICE ORIENTATION. (3 cr; prereq all aerospace 33xx courses, 3401, 3402, Δ)
History and basic concepts of military justice; emphasis on origin, nature, and purpose of Uniform Code of Military Justice and *Manual for Courts-Martial*; relationship between military justice and military discipline; scope and nature of appellate review. Service orientation for newly commissioned officers.

Military Science (Mil)

Staff—Head, Lt.Col. William R. Roope,
USA, 110 Armory

Major Requirements and Course Descriptions

Preprofessional Division

Military Science I

1002w. BASIC MILITARY SKILLS. (1 cr)

A leadership laboratory providing the basic skills and knowledge for drill and ceremonies with and without weapons, first aid, self defense, communications procedures, and physical conditioning.

1003s. BASIC MILITARY SKILLS. (1 cr)

A leadership laboratory providing the basic skills and knowledge for land navigation, small unit operations and weapons usage, intermediate-level drill and ceremonies, and physical conditioning.

1010f,s. U.S. ARMY IN SOCIETY. (2 cr)

Role of the officer and noncommissioned officer in the U.S. Army, Army Reserve, and National Guard; relation to society; application for military and civilian careers.

1012w. U.S. MILITARY HISTORY. (2 cr, §Hist 1952)

U.S. military history from colonial beginnings to 1898; influence of geography, economics, technology, and political decisions on the size, composition, and tactics of U.S. military forces.

1013s. U.S. MILITARY HISTORY. (2 cr, Hist §1953)

U.S. military history from 1898 to the present; influence of geography, economics, technology, and political decisions on the size, composition, and tactics of the U.S. military forces.

Military Science II

1201f. LEADERSHIP: SMALL-UNIT RESPONSIBILITIES. (1 cr)

Laboratory to teach leader responsibilities, to develop leadership skills in a small unit, to increase basic military skills, and to improve physical conditioning.

1202w. LEADERSHIP: SMALL-UNIT COMMUNICATIONS, CONTROL, AND COORDINATION. (1 cr)

Laboratory to develop leadership skills while performing as a small unit leader, to develop skills in communication and control, and to improve physical conditioning.

1203s. LEADERSHIP: SMALL-UNIT TRAINING, TACTICS, AND TERRAIN ASSOCIATION. (1 cr)

Laboratory requiring the developing leader to teach physical training, direct the tactical deployment of a small unit, navigate by terrain to prescribed locations, and develop first aid skills.

1221w. LEARNING TO LEAD. (2 cr)

Fundamental leadership traits. Assessment and development of leadership skills. Theory and practical application.

1222s. TRAINING MANAGEMENT. (2 cr)

Philosophy and principles. Concepts and applications in conducting and evaluating individual and collective training. Emphasis on managerial leadership.

Directed Studies

3970. DIRECTED STUDIES. (Cr ar; prereq #)

Provides flexibility so a student can fit an ROTC course into his/her schedule if it might otherwise prohibit participation in ROTC. Instructor and student determine a convenient time to meet. Course content is the same as regularly listed military science courses.

Professional Division

Military Science III

3130f,w,s. MILITARY SCIENCE III: LEADERSHIP LABORATORY. (1 cr per qtr [3 cr max]; prereq #)

Develops leadership skills and knowledge for effectively commanding, controlling, and communicating the actions of a small unit and for acquiring requisite military skills in areas such as basic mountaineering, drill and ceremonies, small unit operations, land navigation, marksmanship, and physical conditioning.

3131f. LAND NAVIGATION/SMALL UNIT TACTICS. (3 cr; prereq #)

Read and interpret military maps; use basic land navigation techniques; develop skills and knowledge required for squad- and platoon-sized tactical operations.

3132w. LEADERSHIP ASSESSMENT AND TRAINING. (3 cr; prereq #)

A combination of lecture, discussion, and an oral presentation in learning how to apply the principles of leadership while leading, communicating with, and training subordinates. Classroom instruction will focus on U.S. Army infantry organizations.

3133s. SMALL UNIT TACTICS. (3 cr; prereq #)

Small unit operations in conventional and unconventional battlefield environments; employment in tactical situations.

Military Science IV

3140f,w,s. MILITARY SCIENCE IV: LEADERSHIP LABORATORY. (1 cr per qtr [3 cr max]; prereq #)

The practical application of skills and knowledge in leading, supervising, instructing, and training others in planning, organizing, coordinating, conducting, and evaluating the daily activities and special events of the Army ROTC organization.

3141f. MILITARY MANAGEMENT AND PROFESSIONALISM. (3 cr; prereq #)

Staff procedures in military organizations; staff writing, training management, and professional development.

3142w. LEADERSHIP COMMUNICATIONS AND ETHICS. (3 cr; prereq #)

Precepts and practices of military leadership and communication concepts. Code of military ethics and professionalism.

3143s. MILITARY LAW. (2 cr; prereq #)
History and basic concepts of military justice; emphasis on origin, nature, and purpose of Uniform Code of Military Justice and *Manual for Courts-Martial*; relationship between military justice and military discipline; scope and nature of appellate review.

Naval Science (Nav)

Staff—Head, Col. B.W. Sweeney, USMC,
203 Armory

All NROTC Students—Second Year

1203s. SEAPOWER AND MARITIME AFFAIRS.
(3 cr, §Hist 5021, §Hist 5022)
Historical aspects affecting the development of the U.S. Navy from the American Revolution to the present. Examination of several critical, contemporary issues in naval/maritime affairs.

Navy Sequence—Third Year

3301f. NAVAL SHIPS SYSTEMS I. (2 cr)
Introduction to basic thermodynamics, main steam cycle, conventional fossil fuel propulsion systems and nuclear power. Internal combustion engine and gas turbine fundamentals.

3303s. ADVANCED NAVAL OPERATIONS. (3 cr; prereq #)
International rules of the nautical road. Relative motion and ship maneuvering. Application of the maneuvering board in solving motion problems.

Navy Sequence—Fourth Year

3402. PRINCIPLES OF NAVAL MANAGEMENT II.
(3 cr)
Introduction to management at the shipboard level; formal shipboard organization, divisional organization and the Uniform Code of Military Justice.

3403. PRINCIPLES OF NAVAL MANAGEMENT III. (2 cr)
Advanced management at the shipboard level; naval correspondence and directives, security, and the Maintenance. Material Management system.

Marine Corps Sequence—Third Year

3352f. EVOLUTION OF ART OF WAR I. (2 cr; prereq #)
Principles of war. Evolution of warfare from 3500 B.C. through the French Revolution.

3354s. EVOLUTION OF ART OF WAR III. (2 cr; prereq #)
Warfare from World War II through Vietnam.

Marine Corps Sequence—Fourth Year

3452f. AMPHIBIOUS WARFARE I. (2 cr; prereq #)
The origins of amphibious warfare to the Gallipoli campaign.

3453w. AMPHIBIOUS WARFARE II. (2 cr; prereq #)
Amphibious warfare planning and operations from post-World War I through World War II.

3454s. AMPHIBIOUS WARFARE III. (2 cr; prereq #)
Post-World War II amphibious operations; present-day concepts of amphibious operational planning.

Sanskrit

See Institute of Languages and Literatures.

Scandinavian Languages and Literature

Staff—Acting Chair, Jack Zipes, 200B Folwell Hall; *Associate Chair,* William Mishler, 200B Folwell Hall; *Director of Undergraduate Studies,* Kaaren Grimstad, 200A Folwell Hall; *Director of Graduate Studies,* Göran Stockenström, 322 Folwell Hall

Professors: Hasselmo (Scandinavian Linguistics and Swedish), Houe (Danish), Stockenström (Swedish)

Associate Professors: Grimstad (Old Norse, Swedish), Mishler (Norwegian)

The Department of Scandinavian Languages and Literature teaches and conducts research in the languages and literature of the Scandinavian countries, including Finland, in the context of relevant cultural-historical background and milieu. Majors and minors are offered with concentration in Danish, Finnish, Norwegian, and Swedish.

General Education—Courses appropriate for nonmajors are Scan 3503, 3505, 3601, 3602, 3604, 3605, 3606, 3613, 3614, 3615, 3618, 5421, 5502, 5613, 5614, 5615, 5616, 5617, 5631, 5632, 5704, 5711, and 5712

Study Abroad—The department urges students with a strong interest in Scandinavia to make study in a Scandinavian country an integral component of their undergraduate program. Credit for appropriate study

Major Requirements and Course Descriptions

abroad may be applied toward a Scandinavian major or minor. The University offers study opportunities in Denmark, Iceland, Finland, Norway, and Sweden. Further information on study abroad options and procedures is available in the department and also in the Foreign Study section of this bulletin.

B.A. Major Sequence—Scandinavian Languages and Finnish

Required Preparatory Courses—Dan, Nor, Swed or Fin 1101-1102-1103-1104-1105-1106

Major Requirements—Dan, Nor, Swed or Fin 3670 (3 qtrs)

Minimum of 32 cr in 3xxx-5xxx Scandinavian courses, to include 5704, 5970 for major project and one Scandinavian social science course

Scandinavian area studies courses are offered in such departments as art history, geography, political science, and sociology and may be added to the student's program with the consent of the adviser.

Minor Sequence

Three years of Danish, Norwegian, Swedish, Finnish, or equivalent

3503. SCANDINAVIAN FOLKLORE. (4 cr) Grimstad
Literary and folkloristic investigation of Scandinavian ballad and folktale. Readings in translation for nonmajors.

3505. SCANDINAVIAN FICTION FROM 1890 TO PRESENT. (4 cr)
Examined in context of breakdown of traditional forms and changing concepts of "reality."

3601. GREAT LITERARY WORKS OF SCANDINAVIA. (4 cr) Houe
Major literary works from the Middle Ages to the present.

3602. THE SCANDINAVIAN FAIRY TALE AS LITERATURE. (4 cr) Mishler
Examined in context of German romanticism. Emphasis on H. C. Andersen and 20th-century authors who write in his tradition.

3604. FINNISH LITERATURE IN TRANSLATION. (4 cr)
Major literary works from the Middle Ages to the present.

3605. THE SCANDINAVIAN AND FINNISH SHORT STORY. (4 cr)
Stories by important 19th- and 20th-century authors. Readings in English for nonmajors.

3606. THE EXPRESSIONIST FILM IN SCANDINAVIA. (4 cr) Mishler
Evolution of expressionism from works of Strindberg, Edvard Munch, German art and film. Emphasis on films of Sjöström, Dreyer, Bergman.

3613. CHILDREN'S LITERATURE IN SCANDINAVIA. (4 cr) Houe, Stockenström
Representative works, with emphasis on different critical methods of interpretation.

3614. POPULAR FICTION AND CULTURE IN SCANDINAVIA. (4 cr) Houe, Stockenström
Representative genres, with emphasis on different critical methods of interpretation.

3615. THE FAMILY IN SCANDINAVIAN LITERATURE. (4 cr) Houe, Stockenström
Representative texts dealing with family socialization from a historical perspective.

3618. SCANDINAVIAN DRAMA, 1870-1940. (4 cr) Stockenström
Plays viewed in context of modern theatre, with emphasis on different critical methods of interpretation.

3670. TOPICS IN SCANDINAVIAN STUDIES. (4 cr per qtr)
Topics announced before first class meeting. Readings in English for nonmajors. Meets with 5670.

3970. DIRECTED STUDIES. (1-5 cr per qtr [15 cr max]; prereq #, Δ)
Guided individual reading and study of topics not covered in regular courses.

3970H. HONORS COURSE: DIRECTED STUDIES. (1-5 cr per qtr [15 cr max]; prereq #, Δ)
For description, see 3970.

3980. DIRECTED INSTRUCTION. (Cr ar; prereq #)
Use and extension of basic skills by instructing courses for which student has already received credit.

5202. SCANDINAVIAN LITERATURE FROM ROMANTICISM TO THE MODERN BREAKTHROUGH. (4 cr; prereq reading knowledge of a Scandinavian language for Scandinavian grads)
Romantic and early realistic authors.

5421. FINNISH FOLKLORE: THE KALEVALA. (4 cr; offered alt yrs)
The Finnish national epic from a folkloristic point of view. Readings in translation.

5502. THE ICELANDIC SAGA. (4 cr) Grimstad
The saga literature: its origins and development. Readings in translation.

5511. SKALDIC POETRY: ITS METHOD. (4 cr; prereq reading knowledge of Old Norse; offered alt yrs) Grimstad
Representative skaldic poetry and its forms and method.

5613. CONTEMPORARY SCANDINAVIAN LITERATURE. (4 cr) Mishler
Major trends after 1945. Readings in translation for nonmajors.

5614. THE DRAMA OF IBSEN AND STRINDBERG. (4 cr) Stockenström
The later plays viewed in context of modern art and theatre, with emphasis on different methods of visualizing the landscape of the soul on stage.

5615. IBSEN AND THE BEGINNINGS OF THE MODERN DRAMA. (4 cr) Stockenström
The plays of Ibsen; his role as founder of modern European drama. Readings in translation for nonmajors.

5616. STRINDBERG AND THE DRAMA IN REVOLT AND TRANSITION. (4 cr) Stockenström
Strindberg as master of the naturalistic drama and as the father of modernity in European and American theatre. Readings in translation for nonmajors.

5617. SCANDINAVIAN LITERATURE IN ITS EUROPEAN CONTEXT: SYMBOLISM. (4 cr) Stockenström
Symbolism in Scandinavian literature in its European context. Representative European literary texts from late 19th and early 20th centuries—dramas, novels, and criticism—read in translation.

5619. SCANDINAVIAN POETRY SINCE 1890. (4 cr; prereq reading knowledge of a Scandinavian language for Scandinavian grads) Houe, Mishler
Representative poets since 1890.

5631. 19TH-CENTURY SCANDINAVIAN NOVEL. (4 cr)
Development from beginnings to end of 19th century. Readings in translation for nonmajors.

5632. 20TH-CENTURY SCANDINAVIAN NOVEL. (4 cr)
Novels of Hamsun, Strindberg, Lagerkvist, others. Readings in translation for nonmajors.

5670. TOPICS IN SCANDINAVIAN STUDIES. (4 cr per qtr)
For description, see 3670.

5701-5702. OLD NORSE LANGUAGE AND LITERATURE. (4 cr per qtr) Grimstad
Acquisition of reading knowledge of Old Norse; linguistic, philological, and literary study of Old Norse language and literature.

5703. OLD NORSE: SAGA READING AND ANALYSIS. (4 cr; prereq 5702; offered alt yrs) Grimstad
(Continuation of 5702.) Prose narrative in Old Norse; its literary content.

5704. HISTORY OF THE SCANDINAVIAN LANGUAGES. (4 cr)
From early Middle Ages to the present; cultural history. Readings in translation for nonmajors.

5711. STRUCTURE OF THE SCANDINAVIAN LANGUAGES. (4 cr; prereq introductory course in linguistics or #; offered alt yrs)
Syntax and phonology of standard Danish, Norwegian, and Swedish. Readings in translation for nonmajors.

5970. DIRECTED STUDIES. (1-15 cr per qtr; prereq #, Δ)
Guided individual reading and study of topics not covered in regular courses. Readings in literature in Scandinavian.

Danish (Dan)

1101f-1102w-1103s. BEGINNING DANISH. (5 cr per qtr)

1104f-1105w-1106s. INTERMEDIATE DANISH. (5 cr per qtr; prereq 1103 or equiv)
Continued development of reading, writing, and speaking skills.

3670. READINGS IN DANISH LITERARY TEXTS. (4 cr per qtr [28 cr max]; prereq 1106 or equiv)
Use of diverse texts to develop reading, writing, and speaking skills.

Finnish (Fin)

1101f-1102w-1103s. BEGINNING FINNISH. (5 cr per qtr)

1104f-1105w-1106s. INTERMEDIATE FINNISH. (5 cr per qtr; prereq 1103 or equiv)
Continued development of reading, writing and speaking skills; problems and usage of Finnish grammar.

3670. READINGS IN FINNISH LITERARY TEXTS. (4 cr per qtr [max 28 cr]; prereq 1106 or equiv)
Use of diverse texts from 19th and 20th centuries to develop reading, writing, and speaking skills.

Norwegian (Nor)

1101f-1102w-1103s. BEGINNING NORWEGIAN. (5 cr per qtr)

1104f-1105w-1106s. INTERMEDIATE NORWEGIAN. (5 cr per qtr; prereq 1103 or equiv)
Continued development of reading, writing, and speaking skills.

3670. READINGS IN NORWEGIAN LITERARY TEXTS. (4 cr per qtr [max 28 cr]; prereq 1106 or equiv)
Use of diverse literary texts to develop reading, writing, and speaking skills.

Major Requirements and Course Descriptions

Swedish (Swed)

1101f-1102w-1103s. BEGINNING SWEDISH. (5 cr per qtr)

1104f-1105w-1106s. INTERMEDIATE SWEDISH. (5 cr per qtr; prereq 1103 or equiv)
Continued development of reading, writing, and speaking skills.

3670. READINGS IN SWEDISH LITERARY TEXTS. (4 cr per qtr [28 cr max]; prereq 1106 or equiv)
Use of diverse texts to develop reading, writing, and speaking skills.

Sociology (Soc)

Staff—Chair, David Ward, 909 Social Sciences Building; *Director of Undergraduate Studies,* Robert Leik, 1074 Social Sciences Building; *Director of Graduate Studies,* Ronald Aminzade, 1131 Social Sciences Building; *Director of Honors,* Stephen Spitzer, 960 Social Sciences Building

Professors Emeriti: Donohue, Ellenbogen, Johnson

Professors: R. Anderson, Cooperman, Fulton, Galaskiewicz, Knoke, Laslett, Leik, Malmquist, Marini, McTavish, Mortimer, Nelson, Reiss, Ward

Associate Professors: Aminzade, Brustein, Gartner, Kennedy, Kruttschnitt, Spitzer

Assistant Professors: Bian, Broadbent, McLeod, Savelsberg

Lecturer: Carlson

Adjunct Faculty—Brewer (Afro-American Studies), Eustis (Humphrey Institute), Finch (School of Public Health), Hearn (College of Education), Louis (College of Education), Litman (School of Public Health), Menanteau (Rural Sociology), Samaha (History), Snyder (Psychology), Sykes (Speech-Communication)

Sociology seeks to develop a scientific understanding of human social behavior. Two B.A. programs (one with a general focus and one with a focus on law, criminology, and deviance) and a B.S. program are offered. They emphasize the skills of social inquiry necessary for analyzing patterns of

social relationships. The B.S. program is for students interested in a more rigorous mathematical concentration in research methodologies. You must see a sociology adviser to discuss your qualifications for the B.S. option. The study of sociology can contribute to careers in such areas as evaluation research for programs in the public and private sectors, criminal justice, teaching, and social service, and can offer preparation for advanced study in the social sciences, health fields, counseling, law, and business.

Current information about sociology B.A. and B.S. degree programs, minor programs, course offerings, faculty academic interest areas, the honors program, graduate and law schools, field experience, special course registrations, and other undergraduate academic opportunities is available in the Undergraduate Advising Office, 923 Social Sciences Building (612/624-4300).

Directed Studies, Field Experience—

Students in sociology are encouraged to plan a field experience by participating in an internship. Consult the Undergraduate Advising Office and Office of Special Learning Opportunities, 220 Johnstn Hall, for information about arranging internships.

General Education—1001, 1003, and 1004 deal with a broad sociological analysis of American social life. Courses at the 3xxx and 5xxx levels focus on more advanced study in substantive areas.

Study Abroad—The department strongly urges students to include study abroad in their undergraduate program. Credits for appropriate study may be incorporated into a sociology major or minor by prior arrangement. Programs with a field component, such as MSID, SPAN and the HECUA programs, are well-suited to sociology projects. Current faculty interests include comparative study in China, France, Japan, Latin America and the Caribbean, and Sweden. See also Foreign Study.

B.A. Major Sequences

All major courses must be taken A-F. At least 12 cr in sociology must be taken on the Twin Cities campus.

Required Preparatory Course—1001**Major Requirements—General Option:**
3201, 3401

3801-3802-3803 (should be taken as soon as possible)

5701 or 5703 or 5705 or 5711

16 additional cr in 3xxx-5xxx sociology courses; 3970, 3980, and 5970 may be included with instructor's approval

Major project (see advising office for details)

Required Preparatory Course—1001**Major Requirements—Sociology of Law, Criminology, and Deviance Option:** 3201 or 3401

3801-3802-3803 (should be taken as soon as possible)

5701 or 5703 or 5705 or 5711

3101-3102

Three courses chosen from 5101, 5102, 5104, 5105, 5107, 5108, 5111, 5114, 5125, 5135, 5141, 5142, 5147, 5148, 5149, 5161, 5162

Major project (see advising office for details)

B.S. Major Sequence

All major courses must be taken A-F. At least 12 cr in sociology must be taken on the Twin Cities campus.

Required Preparatory Course—1001**Major Requirements—3201, 3401**

3801-3802-3803 (should be taken as soon as possible)

5701 or 5703 or 5705 or 5711

16 additional cr in 3xxx-5xxx sociology courses; 3970, 3980, and 5970 may be included with instructor's approval

A 6-8 cr research design project in sociology (see advising office for details)

27 cr in supportive field courses from an approved list; please see a sociology adviser

to discuss your qualifications before considering this option.

Minor Sequences—General Information

Eighty percent of all upper division minor course credits must be taken A-F. At least 12 cr in sociology must be taken on the Twin Cities campus. Substitutions for courses infrequently offered may be arranged with prior consultation with the undergraduate adviser.

Minor Sequence—General Sociology**Required Preparatory Course—1001**

Minor Requirements—3201 or 3401; 3801; one theory course chosen from 5701, 5703, 5705, 5711; 8 cr in 3xxx or 5xxx sociology courses

Minor Sequence—Aging**Required Preparatory Course—1001**

Minor Requirements—3201, 3401, 3937, 5938, 4 cr in a 3xxx or 5xxx sociology course related to the student's interest in gerontology (e.g., 3501, 3551, 5855, 5956)

Minor Sequence—Criminology and Deviance**Required Preparatory Course—1001**

Minor Requirements—3101-3102, 12 cr in 3xxx-5xxx sociology courses listed under the heading Criminology and Deviance

Minor Sequence—Family**Required Preparatory Course—1001**

Minor Requirements—3201, 3401, 3501, 5505; one sociology course chosen from 3524, 5441, 5524

Minor Sequence—Political Sociology**Required Preparatory Course—1001**

Minor Requirements—3401, 3405, 3801, 5311, 5755

Minor Sequence—Social Organization

Required Preparatory Course—1001 or 1001H

Major Requirements and Course Descriptions

Minor Requirements—3401, 3405 or 5405, 5411; one theory course chosen from 5701, 5703, 5705 or 5711; one sociology course from approved list, available in advising office

Minor Sequence—Social Psychology

Required Preparatory Course—1001

Minor Requirements—3201, 3214, 5205, 5211 or 5215; one theory course chosen from 5701, 5703, 5705 or 5711

General

1001f,w,s,su. INTRODUCTION TO SOCIOLOGY. (4 cr)

The scientific study of social behavior. Overview of major theories, methods, concepts, and research findings. Characteristics of basic social units (social relations, groups, organizations, institutions, society) and their patterns of interrelation and processes of change.

1001Hf,w,s. HONORS COURSE: INTRODUCTION TO SOCIOLOGY. (4 cr)

For description, see 1001.

1003. SOCIAL PROBLEMS. (4 cr) Aminzade, Savelsberg

Sociological analysis of major contemporary problems; theory behind the causes, discussion of methods for studying them, and analysis of potential solutions. Problems may include poverty, racial discrimination, inequality, sex roles, crime, drugs, population problems, and pollution.

1004. AMERICAN RACE RELATIONS. (4 cr) Knoke

Sociological overview of relations between American racial minorities (Afro-American, Chicano, Native American, Asian) and the dominant majority. Consideration of migration and settlement patterns; community life and family life; gender roles; education and labor force participation; inequalities in wealth, status, health, and welfare; discrimination and institutional racism; public policy responses.

Criminology and Deviance

Some courses in this section were formerly taught in the Department of Criminal Justice Studies, which no longer exists. Students who took criminal justice studies (CJS) courses may not repeat for credit the same courses that are now taught in the Department of Sociology.

3101f,w,su. INTRODUCTION TO AMERICAN CRIMINAL JUSTICE. (4 cr, §CJS 3101) Carlson, Kruttschnitt, Samaha, Savelsberg, Ward
Components and dynamics as well as philosophical underpinnings of the criminal justice system.

3102w,s,su. INTRODUCTION TO CRIMINAL BEHAVIOR AND SOCIAL CONTROL. (4 cr; prereq 3101) Kruttschnitt, Savelsberg, Ward
Basic issues in criminology and the sociology of law and social control organizations.

5101. SOCIOLOGY OF LAW. (4 cr; prereq 3101-3102 or #: 5705 recommended) Cooperman, Savelsberg
Sociological analysis of law and society. Social forces involved in creation of legal norms (both civil and criminal), procedures of enforcement, and impact of law on social change.

5102. CRIMINOLOGY. (4 cr; prereq 3101-3102 or #) Kruttschnitt, Savelsberg
Nature and types of crime, problems in measurement of incidence and trends, and review of sociological theories of crime causation. Implications for crime prevention and control.

5104. COMMUNITY-BASED CORRECTIONS. (4 cr, §CJS 5113; prereq 3102 or #) Carlson, Ward
Theories behind and structures of diversion, probation, parole, and other community corrections programs that exist as alternatives to imprisonment.

5105. CONTEMPORARY CORRECTIONS. (4 cr; prereq 3101-3102 or #: 5161, 5162 recommended) Ward
Advanced study of correctional organizations such as prisons and jails, probation and parole, department and community corrections. Penal policies and practices in the United States compared with advanced penal systems in other countries.

5107. COMPARATIVE CRIMINOLOGY AND CRIMINAL JUSTICE SYSTEMS. (4 cr, §CJS 5121; prereq 3102 or #) Savelsberg, Ward
Theories of crime causation and operation of criminal justice agencies in other countries.

5108. CURRENT ISSUES IN CRIME CONTROL. (4 cr, §CJS 5207; prereq 3102 or #) Carlson, Kruttschnitt, Savelsberg
Criminal justice policies examined from perspective of courts, legislature, community, and interest groups; impact of changes in policy on society and social control agencies.

5111. SOCIOLOGY OF DEVIANT BEHAVIOR. (4 cr; prereq 3101-3102 or #)
The nature of deviant behavior, the social process associated with the careers of deviants, and the relationship of deviancy to problems of social control.

5114. THE SOCIAL CONTROL OF WOMEN OFFENDERS. (4 cr, §CJS 5114; prereq 3102 or #; offered alt yrs) Kruttschnitt

Historical and current explanations for female criminality; current trends in women's participation in crime and treatment of women by legal system.

5125. POLICING IN AMERICAN SOCIETY. (4 cr; prereq 3101-3102 or #; 5161, 5162 recommended) Sykes
Police organizations and operations from a social science perspective. Formal and informal policing: role and functions; legal bases; accountability and restraints; relations with policed populations, emphasizing minorities, youth, and recognized violators; use of violence; unethical and illegal practices; civil liberties; intraorganizational and interorganizational relations; social theory and change.

5135. WHITE COLLAR CRIME. (4 cr; prereq 3101-3102 or #; 5161, 5162 recommended; offered alt yrs) Savelsberg

White collar crime, broadly construed; roots in American society, responses offered by theoreticians and amateur and professional politicians.

5141. JUVENILE DELINQUENCY. (4 cr; prereq 3101-3102 or #; 5161, 5162 recommended)

Advanced study of juvenile delinquency and societal response to it through regulatory agencies; special characteristics of juvenile justice institutions.

5142. JUVENILE JUSTICE LAW AND ORGANIZATION. (4 cr, §CJS 5103; prereq 3101-3102 or #; 5161, 5162 recommended; offered alt yrs) Malmquist

Historical evolution of juvenile court; organizational relationships among court, police, and other agencies; policies regarding serious offenders and status offenders; processes of intake, diversion, pretrial detention, waiver to adult court, and sentencing; conflicts over due process and treatment objectives; current movements to abolish juvenile justice system.

5147. SOCIOLOGY OF MENTAL DISORDERS.

(4 cr; prereq 1001 or #) Malmquist, McLeod, Spitzer
Social definitions and origins of mental illness, its epidemiology, patterns of reaction to mental illness, sociological analysis of mental health programs and their effectiveness. Social policy implications of mental health definitions.

5148. CRIMINAL PSYCHOPATHOLOGY. (4 cr, §CJS 5205; prereq sr or grad; offered alt yrs) Malmquist

Psychiatric and psychological aspects of antisocial and criminal behavior as related to issues faced in the courts and criminal justice system.

5149. KILLING. (4 cr; prereq sr or grad or law student) Malmquist, Ward

Sociological, legal, and psychological aspects of diverse types of killing. The topic of "normal" killings is contrasted with various pathological types. Special sub-topics include: mentally disturbed killings, sexual killings, killings within families, gang killings, and terrorist killings.

5161. CRIMINAL LAW IN AMERICAN SOCIETY.

(4 cr, §CJS 5101) Samaha

Purposes and principles of criminal law; proper limits of criminal sanction and suggested reforms in existing criminal law.

5162. CRIMINAL PROCEDURE IN AMERICAN SOCIETY. (4 cr, §CJS 5102) Samaha

Power of the state to intrude into lives of citizens and deprive them of life, liberty, and property in order to enforce criminal laws; topics such as arrest, search and seizure, pretrial practices, and prisoners' rights. Suggested limits on discretionary power of police, prosecutors, judges, and corrections authorities.

Social Psychology

3201. PRINCIPLES OF SOCIAL PSYCHOLOGY.

(5 cr; prereq 1001) Mortimer, Spitzer

Ideas and findings related to social psychology; experience in developing empirically based knowledge in social science.

3201H. HONORS COURSE: PRINCIPLES OF SOCIAL PSYCHOLOGY. (5 cr; prereq sociology honors student, 1001 or 1001H or #) Mortimer, Spitzer

For description, see 3201.

3214. UNDERSTANDING EVERYDAY LIFE. (4 cr; prereq soph, jr or sr) Fulton, Spitzer

Behaviors (activities, personal associations), orientations (values, attitudes, beliefs), and personal interpretations of "typical" individuals; their relationship to social characteristics; the effects of transitions—anticipated (e.g., educational/occupational choice, marriage) and unexpected (e.g., unemployment, illness).

5205. SYMBOLIC INTERACTION. (4 cr; prereq 3201 or 5201 or equiv or #) Spitzer

Methods of acquiring knowledge in social psychology; outstanding examples of research. Social psychology of small groups, mass behavior, making political and economic choices. Current thinking and research in symbolic interaction in light of concepts and theories presented in introductory courses in social psychology.

5211. SOCIAL PROCESSES IN SMALL GROUP SETTINGS.

(4 cr; prereq 3201 or 5201 or equiv or #; offered alt yrs) R Anderson

Small group research and theory focusing on laboratory and nonlaboratory investigation of interpersonal exchange, communication structures, status and power relations, coalition formation, reference groups, role differentiation, group uniformity, social influence, problem-solving behavior. Laboratory arranged.

5215. SELF-CONCEPT IN THEORY AND RESEARCH.

(4 cr; prereq jr or sr or grad, 16 cr in social sciences and/or education or #; offered alt yrs) Spitzer
Major sociological theories and assessment method characterizing study of the self; applications to and findings in topical areas such as crime and delinquency, mental illness, socialization, aging, drug abuse, group processes, and policy evaluation.

Major Requirements and Course Descriptions

Social Change and Social Movements

For courses related to this area see: 3315, 3457, 3671, 5301, 5311, 5703

Social Organization, Organizations, and Occupations

Other sociology courses related to this area include 3315, 3456, 5415, 5441, 5481, 5855, 5953, 5958

3401. PRINCIPLES OF SOCIAL ORGANIZATION.

(5 cr; prereq 1001, 3801 or equiv) Galaskiewicz, Knoke, Nelson, Savelsberg

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.

3405. INEQUALITY: INTRODUCTION TO STRATIFICATION.

(4 cr; prereq 1001) Aminzade, Brustein, Fulton, Nelson

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.

3411. UNDERSTANDING FORMAL ORGANIZATIONS.

(4 cr; prereq 1001)
Formal organizations as major social actors in our work lives, personality development, social change and conflict. Life-course analysis of enterprises, bureaucracies, and voluntary organizations. Emphasis on organizational control, conflict, coordination, and interorganizational sets and relationships.

3457. SWEDEN: SOCIAL STRUCTURE, SOCIAL CHANGE.

(4 cr; offered alt yrs) Cooperman, Reiss
Analysis of stability and change in 20th-century Sweden. Effects of rapid industrialization and post-industrial economic trends on social structure. Current issues explored include changes in economy, urbanization, demography, social institutions, class, status and mobility, inequality, traditional and postmodern values.

3481. MODERN JAPANESE SOCIETY.

(4 cr, §EAS 3481; prereq Soc 1001 or #) Broadbent
Japanese social institutions including family, education, business and labor relations, government and the status of women. How they differ from the West and have contributed to Japanese economic success.

3954. SOCIOLOGICAL PERSPECTIVES ON RACE, CLASS, AND GENDER.

(4 cr, §Afro 3954)

Brewer
Societal-level analysis of race, class, and gender inequality. How the three forms of inequality operate independently and in conjunction with one another in American institutions and society.

5151. RELIGION AS A SOCIAL INSTITUTION.

(4 cr; prereq 8 cr in social sciences or #; offered alt yrs; offered through Extension) Johnson

Structure and function of religious organizations in various types of societies; nature of religious leadership, type of religious participation; relationship of religion to other social institutions.

5311. SOCIOLOGY OF CONFLICT.

(4 cr; prereq 3401 or 5401 or equiv or #; offered alt yrs) Cooperman, Leik, Savelsberg

Theoretical, empirical study of group conflict. Methods and models. Animal conflict. Aggression and conflict. Types of conflict: feuds, community, ecologies of urban conflict, racial, internal war, revolution. Conflict and organization: relation of stratification, industrial, and social change to conflict.

5405. SOCIAL STRATIFICATION AND MOBILITY.

(4 cr; prereq 3401 or 3405 or 5401 or any 3xxx sociology course or equiv or #; offered alt yrs; some statistics recommended) Nelson

Form and content of hierarchical arrangements. Relationship of hierarchical arrangements to problems of social order and individual behavior.

5411. FORMAL ORGANIZATIONS.

(4 cr; prereq 3401 or 5401 or equiv or 8 cr sociology or anthropology or psychology or political science or economics or #) Knoke

Sociological analysis of formal organizations. Theories of structure of and behavior in corporations and bureaucracies. Corporate structure explored from standpoint of role expectations, transaction costs, and structural responses to organizational failures. Other topics include power, conflict, and bargaining in organizational decision making; course content varies.

5953. SOCIOLOGY OF EDUCATION.

(4 cr, §EdPA 5190; prereq 1001 or equiv or #) Louis

Advanced studies. School as socialization process, social structure of education, role of school in social change, other areas. Theory and empirical research.

Historical/Comparative Sociology

Other sociology courses related to this area include 3405, 3457, 3481, 3503, 3954, 5107, 5114, 5703, 5705

3315. LATIN AMERICAN SOCIETIES IN TRANSITION. (4 cr; prereq 8 cr sociology or economics or anthropology or political science or #) Menanteau
Relationship of population, technology, and organization structure to levels of modernization among Latin American nations. Differentiation, diffusion, innovation, and social conflict as precipitants of social change.

3456. WESTERN EUROPEAN SOCIETIES. (4 cr; offered alt yrs) Brustein, Cooperman
Comparative analysis of Western European societies. Examination of current socioeconomic trends with regard to population composition, ethnic patterns, economic organization and social structure, class, mobility and status, family and gender, city life, and culture.

3477. HISTORICAL SOCIOLOGY. (4 cr; prereq 1001 or #) Aminzade, Brustein, Laslett
Introduction to historical sociology focusing on the efforts of sociologists to develop historically informed social theory and theories of social processes over time; class and state formation, collective action and political behavior, and family and gender roles. Course materials will reflect expertise of the instructor.

3755. INTRODUCTION TO POLITICAL SOCIOLOGY. (4 cr; prereq 1001 or #) Aminzade, Brustein
Concepts of power, politics, and state and theoretical traditions rooted in writings of Marx, Weber, and Tocqueville. Democracy, fascism, communism, and analyses of revolution, nation-building, and dynamics of political change.

3951. COMPARATIVE ETHNIC GROUP RELATIONS. (4 cr; prereq 1001 or #) Brewer, Savelsberg, Sykes
Theories of ethnic stratification. Relations of minorities and elites viewed in historical and cross-cultural comparative perspective, examining the United States and other countries (e.g., South Africa, Mexico).

5301. SOCIAL MOVEMENTS IN A CHANGING SOCIETY. (4 cr; prereq 3401 or 5401 or equiv or #; offered alt yrs) Aminzade, Broadbent, Brustein
Origins and organization of social movements. Dilemmas and challenges facing movement organizations. Strategies and tactics of protest movements. Relationship with social movements and political institutions, including parties, the state, and the mass media. Role of social movements in the dynamics of social change.

5415. COMPARATIVE SOCIAL STRUCTURE. (4 cr; prereq 20 cr sociology, economics or political science or #; offered alt yrs) Broadbent, Cooperman, Savelsberg
Comparative analysis of selected societies such as Western European, African, Middle Eastern. Analysis of changing social class, status, cultural patterns, and institutions. Regional and cross-national social patterns and social movements.

5481. COMPARATIVE ASIAN DEVELOPMENT. (4 cr, §EAS 5481; prereq Soc/EAS 3481, sociology of development, Asian-related courses or #; offered alt yrs) Broadbent
Comparison of the political-economic and sociocultural institutions creating high-speed growth and other social and political effects in the East Asian area, focusing on Japan and the "four little tigers": Taiwan, South Korea, Hong Kong, and Singapore.

5755. SOCIAL STRUCTURE AND POLITICAL BEHAVIOR. (4 cr; prereq 3401 or 5401 or equiv or #) Aminzade, Broadbent, Brustein
Alternative theoretical perspectives on power, the state, political parties, and political change. Relationship between socioeconomic structures and political behavior. Nature and social origins of democratic and authoritarian forms of the state. Distribution of power in contemporary United States, Western Europe, and/or East Asia.

5954. SOCIOLOGY OF GENDER. (4 cr; prereq 8 cr social sciences or #; offered alt yrs) Laslett
Historical, contemporary, and feminist perspectives on the social organization and construction of gender roles and relationships. Examines how gender shapes and is shaped by elements of social organization such as family, economy, politics and ideology.

Family Sociology

Other sociology courses related to this area include 3954, 5954

3501. THE FAMILY. (4 cr; prereq 1001 or #) Laslett, Marini, McLeod, Reiss
The family in contemporary American society with attention to historical and cross-cultural comparisons; interrelationships with other social institutions, socialization, patterns of mate selection, life cycle processes, and norms of human sexuality.

3503. SEX, ROMANCE, AND RELATIONSHIPS. (4 cr; prereq 1001) Laslett
Sociological, historical, and feminist perspectives on gender relationships and personal life; ideas of masculinity and femininity; the social and historical construction of love and romance, intimacy, emotional and personal life, and sexuality.

3524. AMERICA'S SEXUAL CRISIS. (4 cr) Reiss
Explanation of why American society has difficulty in resolving sexual problems such as AIDS, pregnancy, rape, and child sexual abuse. Analysis of current trends in our societal ways of coping with sexual problems.

3551f,w. WORLD POPULATION PROBLEMS. (4 cr) Kennedy
Population growth and natural resources, population dynamics, fertility and mortality in less developed nations, population forecasts, population policies to reduce fertility.

Major Requirements and Course Descriptions

5441. WORK-FAMILY LINKAGES. (4 cr; prereq 8 cr sociology or #; offered alt yrs) Mortimer
Theoretical and methodological approaches to the work-family interface; effects of spouses' work characteristics on the family, including child socialization; family's influence on male and female labor force participation and occupational attainment; changes in work organizations related to increasing prevalence of female employment and dual-earner families.

5524. SOCIAL CONSTRUCTION OF SEXUALITY. (4 cr; prereq 8 cr sociology or #) Reiss
Ways in which society shapes sexual customs. How sexuality is influenced by a society's beliefs concerning jealousy, gender roles, and normality. Comparison and explanation of U.S. sexual customs and those in Western and non-Western societies.

5555. POPULATION THEORY. (4 cr; prereq 3551 or #; offered alt yrs) Kennedy
What social science theory is; systematic evaluation of writings in population as theoretical works.

5561. DEMOGRAPHIC METHODS. (4 cr, §PubH 5460; prereq 3551 or #; offered alt yrs) Kennedy
Demographic measures and concepts of fertility, mortality, and migration. Stable population methods, demographic estimates from incomplete data.

Rural Sociology

1651. RURAL SOCIOLOGY. (4 cr)
Factual data necessary to understand problems of rural social life.

3671. COMPARATIVE RURAL SOCIETIES: LATIN AMERICA. (4 cr; prereq 8 cr sociology or anthropology or economics or political science or #) Menanteau
Social and cultural change in Latin America. Demographic and ecological characteristics, institutional structure and its accompanying associations; linkages with outside and world views.

Social Theory

5701. ANALYTICAL SOCIAL THEORY. (4 cr; prereq 8 cr social sciences or #) Cooperman
Standards for evaluating sociological explanations. Main types of sociological theory: systems, theories of conflict, exchange, network, interpretive. Current issues in theoretical analysis.

5703. SOCIAL LIFE AND CULTURAL CHANGE. (4 cr; prereq 8 cr social sciences or #) Fulton
Theories of social change; methodological problems. Comparative social thought and structure of antiquity as basic data for analysis.

5705. BACKGROUNDS OF MODERN SOCIAL THOUGHT. (4 cr; prereq 8 cr social sciences or #) Brustein, Laslett, Marini
Originators of modern sociological theory examined through original texts: Marx, Weber, Durkheim, Freud, and Gilman. Division of labor, social cohesion and social control, gender and social reproduction, class relations and the social organization of production, norms and values, and history.

5711. ELEMENTS OF SOCIOLOGICAL ANALYSIS. (4 cr; prereq 8 cr social sciences or #) Broadbent
Premises upon which social theories are developed. Construction of social theory.

Methodology

3801f,w. SOCIOLOGICAL METHODS I: DESCRIPTIVE STATISTICS. (5 cr; prereq intermediate algebra or GC 0631) Bian, Leik, McLeod, McTavish
Descriptive statistics in analysis of sociological data, measures of central tendency, deviation, correlation and regression graphs, simple treatment of three and four variables.

3801Hf. HONORS COURSE: SOCIOLOGICAL METHODS I: DESCRIPTIVE STATISTICS. (5 cr; prereq intermediate algebra or GC 0631 or #) Bian, Leik, McLeod, McTavish
For description, see 3801.

3802w,s. SOCIOLOGICAL METHODS II: STATISTICAL INFERENCE. (5 cr; prereq 3801 or equiv) Bian, Leik, McLeod, McTavish
Statistical inferences, probability, hypothesis tests, use of statistical reasoning in analysis of sociological data.

3802Hw. HONORS COURSE: SOCIOLOGICAL METHODS II: STATISTICAL INFERENCE. (5 cr; prereq 3801H or equiv or #) Bian, Leik, McLeod, McTavish
For description, see 3802.

3803f,s. SOCIOLOGICAL METHODS III: RESEARCH METHODS. (5 cr; prereq 3801, 3802 or equiv or #) R Anderson, Bian, McTavish
Principles of research design, data collection, and analysis focusing on field observation and survey design and analysis. Practice in data collection and analysis.

3803Hs. HONORS COURSE: SOCIOLOGY RESEARCH METHODS. (5 cr; prereq 3802H or equiv or #)
For description, see 3803.

3811f,w. COMPUTER USAGE FOR SOCIAL STATISTICS. (1 cr; §3801 recommended; S-N only)
Elementary computer usage in social statistics applications. Use of statistical program packages for analysis of sociological data.

5801. COMPUTER METHODS IN SOCIAL RESEARCH. (4 cr; offered alt yrs) R Anderson
Basic concepts of information processing for social sciences research; elementary computer programming; practice in the use of computers for data analysis in the social sciences; problems of computer usage in sociology.

5812. CONTENT ANALYSIS METHODS. (4 cr; pre-req 3803 or equiv or #; offered alt yrs) McTavish
Content analysis methods used in social sciences research, emphasizing computer-based developments. Theory, concept and dictionary formation, interview and data preparation procedures, contextual and conceptual computer analysis, interpretation, integration into quantitative and qualitative research.

Aging and the Life Course

3937. SOCIAL GERONTOLOGY: ELDERNS IN AMERICAN SOCIETY. (4 cr; prereq 1001 or #)
McTavish
Situations and problems facing aging people in modern societies. Aspects of human aging from a sociological perspective.

5855f,s. SOCIOLOGY OF MEDICINE AND HEALTH CARE: AN INTRODUCTION TO MEDICAL SOCIOLOGY. (4 cr, §PubH 5790; prereq jr or sr or grad) Litman
Social factors associated with incidence of physical and mental illness and treatment. Social organization of medical institutions. Public needs and medical services. Sociology of aging, social problems of the aged.

5938. AGING AND THE LIFE COURSE. (4 cr; pre-req 3201 or 5201, 3401 or 5401, 3937 or equiv or #; offered alt yrs) McTavish
Theories of aging, age stratification, generational change; comparative study at organizational and individual levels.

5956. SOCIOLOGY OF DEATH. (4 cr; prereq jr or sr, 8 cr sociology or #) Fulton
Issues and problems that mortality presents in contemporary society.

Other Courses

3352. SOCIOLOGY OF CULTURAL FORMS. (4 cr; offered alt yrs) Spitzer
Social development and usage of cultural forms, including art, music, theatre, popular arts, folk arts, and forms of social communication.

3960. TOPICS IN SOCIOLOGY. (1-5 cr per qtr; pre-req 1001 or #)
Special one-time offerings for juniors and seniors; topics specified in *Class Schedule*.

5966. ADVANCED PROJECT SEMINAR. (4 cr; pre-req all other required sociology coursework, Comp 3014 or #)
Designed to assist sociology majors in preparing research reports that satisfy the major project requirement. Provides guidance and direction in defining a research problem, collecting or selecting data, analyzing data, and writing a sociology research paper.

3970f,w,s. DIRECTED STUDIES. (1-15 cr per qtr; pre-req #)
Guided individual reading or study.

3990. SOCIOLOGY HONORS PROJECT. (4 or 8 cr per qtr [8 cr max]; prereq jr or sr sociology honors student, #)
Individual work on honors thesis under supervision of student's honors thesis adviser.

5960. TOPICS IN SOCIOLOGY. (1-5 cr per qtr; pre-req 1001 or #)
Special one-time offerings for juniors, seniors, and graduate students; topics specified in *Class Schedule*.

5970f,w,s. DIRECTED STUDIES. (1-15 cr per qtr; pre-req #)
Guided individual reading or study.

Spanish and Portuguese

Staff—Chair, Rene Jara, 34 Folwell Hall,
Director of Undergraduate Studies, Anthony Zahareas

Professors: Jara, Ramos-Gascon, Sousa, Spadaccini, Vidal, Zahareas

Associate Professors: Klee, Reis, Sullivan

Assistant Professors: Ocampo, O'Connell

The department's undergraduate major programs focus on the communication skills, information and materials, and analytical and critical methodology necessary to explore Hispanic, Hispano-American, and Luso-Brazilian cultural traditions. Their broad ranges of approach emphasize the application of language skills to aspects of daily life, to intellectual endeavor, and to dealing with problems of society.

Course offerings emphasize four areas: (1) oral and written language fluency, (2) theoretical linguistics and language variations and dialects, (3) representative literature analyzed as artistic achievement and as cultural expression within a sociopolitical context, and (4) civilizations and cultures of

Major Requirements and Course Descriptions

areas in which Spanish or Portuguese is spoken.

Information about advising services, student participation in decision making, the Undergraduate Student Association, and cultural opportunities can be obtained at the department undergraduate office, 2 Folwell Hall, and is presented in a brochure available there.

General Education—Courses taught in English offer a broad selection of approaches to the literature, civilization, and culture of the Hispanic world. General interest courses, which may be used to meet the Route II language requirement, include Span 1501, 1502, 1503, 3601, 3602, 3610, 3614, 3615, Port 3603, and SpPt 3610.

Study Abroad—An extended stay overseas is important to the development of language skills and cultural insights. All majors and minors are urged to incorporate at least one study abroad experience into their undergraduate academic program. The University offers numerous summer, quarter, semester, and full-year opportunities for study in Spain and Latin America, including programs in Mexico and Spain sponsored by this department. Appropriate credits from study abroad easily can be applied toward a Spanish or Portuguese major or minor. For further information on options and procedures, consult with an undergraduate adviser in the department and see Foreign Study in this bulletin.

B.A. Major Sequence—Spanish

Required Preparatory Courses—1101-1102-1103-1104-1105-1106 or equiv

Major Requirements—A total of 49 credits distributed as follows:

I. 29 required credits:

Group I: 3002, 3004, 3005 (12 cr)

Group II: 3104 (4 cr)

Group III: One course each in Spanish or Spanish-American literature, Spanish or Spanish-American culture, and Hispanic Linguistics (13 cr)

II. 20 elective credits at the 3xxx and/or 5xxx level, selected in consultation with an assigned departmental adviser.

Completion of major project

Satisfactory score on Spanish proficiency examination

All major courses must be taken A-F, and grades of C or better must be earned in all courses. No more than 18 cr in 3xxx language skills courses may be used to fulfill major requirements. At least three major courses must be taken on the Twin Cities campus. Not acceptable for major credit: courses taught in English, credit earned in community tutorial programs, SpPt 3980.

For requirements for teaching licensure, see the *College of Education Bulletin*.

B.A. Major Sequence—Spanish-Portuguese

Required Preparatory Courses—Span 1101-1102-1103-1104-1105-1106 or equiv

Port 1001-1002-1003-1004-1005-1106 or equiv

Major Requirements—Two B.A. tracks are available: one includes about two-thirds of the 3xxx-5xxx cr in Spanish courses and the remainder in Portuguese courses to achieve a Spanish emphasis, the other with reversed proportions to achieve a Portuguese emphasis

22 credits from each of the five groups as follows:

Group I: Port 3003 or 4 cr from Span 3002, 3004, or 3005 series

Group II: Span 3104

Group III: Port 3501 or Port 3502 or Span 3501 or Span 3502 or Span 3512

Group IV: Port 3910 or Span 3910 or Span 3940

Group V: Span 3730

30 elective credits at the 3xxx and/or 5xxx level, selected in consultation with an assigned department adviser.

Completion of major project

Satisfactory score on the Spanish/Portuguese Proficiency Examination

All major courses must be taken A-F, and grades of C or better must be earned in all of the courses. No more than 18 cr in 3xxx

language skills courses may be used to fulfill the requirements. At least three major courses must be taken on the Twin Cities campus. Not acceptable for major credit: courses taught in English, credit earned in community tutorial programs, SpPt 3980.

Minor Sequence—Spanish

Required Preparatory Courses—1101-1102-1103-1104-1105-1106 or equiv

Minor Requirements—A total of 24 credits distributed as follows:

Group I: 3002, 3004, 3005 (12 cr)

Group II: 12 cr (min) in 3xxx- and/or 5xxx-level literature, culture, or linguistics courses.

All courses must be selected in consultation with an assigned department adviser. All courses must be taken A-F, and grades of C or better must be earned in all courses. Only one directed study or independent study course and only one topics course may be taken to fulfill the requirements. At least two minor courses must be taken on the Twin Cities campus. Not acceptable for minor credit: SpPt 3980, credits earned through community tutorial programs, courses taught in English.

Minor Sequence—Portuguese

Required Preparatory Courses—1001-1002-1003-1004-1005-1006 or equiv

Minor Requirements—A total of 25 credits distributed as follows:

Group I: 3003 (5 cr)

Group II: 20 credits in 3xxx- and/or 5xxx-level literature, culture, and/or linguistics courses.

All courses must be selected in consultation with an assigned departmental adviser. All courses must be taken A-F, and grades of C or better must be earned in all courses. Only one directed study or independent study course and only one topics course may be taken to fulfill the requirements. At least two minor courses must be taken on the Twin Cities campus. Not acceptable for minor credit: SpPt 3980, credits earned

through community tutorial programs, courses taught in English.

Spanish (Span)

1101-1102-1103. BEGINNING SPANISH. (5 cr per qtr)

Basic listening, speaking, reading, and writing skills. Stress on the development of communicative competence. Some cultural readings.

1104. INTERMEDIATE SPANISH. (5 cr; prereq 1103 or 3 yrs high school Spanish)

Speaking and comprehension; development of reading and writing skills based on materials from Spain and Spanish America. Grammar review; compositions and oral presentations.

1105. INTERMEDIATE SPANISH. (5 cr; prereq 1104 or 4 yrs high school Spanish)

For description, see 1104.

1106. INTERMEDIATE SPANISH. (5 cr; prereq 1105 or 5 yrs high school Span)

For description, see 1104.

1501. CULTURE, CIVILIZATION OF SPAIN, PORTUGAL: THE ROOTS OF MODERN SPAIN, PORTUGAL. (4 cr)

The cultural evolution of Iberian civilization from its origins to the present. Recurring artistic and intellectual problems. Taught in English.

1502. CULTURE, CIVILIZATION OF LATIN AMERICA: INDIAN, EUROPEAN-COLONIAL, AFRICAN ROOTS. (4 cr)

Cultural manifestations and societal changes in the New World. Major pre-Columbian societies, Spanish and Portuguese conquest of America, colonial life through the 18th century. Taught in English.

1503. CULTURE, CIVILIZATION OF MODERN LATIN AMERICA: SOCIETIES IN CHANGE. (4 cr)

Cultural implications arising from struggles for political and economic independence during the 19th and 20th centuries. Cultural characteristics of principal regions of contemporary Latin America. Causes of developmental differences. Taught in English.

3002. READING FOR SPEED AND COMPREHENSION. (4 cr; prereq 1106 or equiv)

Sharpen reading skills, expand vocabulary, improve comprehension. Variety of practical and literary materials will be read; discussion of readings, student presentations, short papers.

3004. WRITTEN COMMUNICATION: FORMAL AND INFORMAL. (4 cr; prereq 1106 or equiv)

Exploration of different composition types. Individual and class exercises based on model writings. Grammar review as needed. Emphasis on clarity of expression and structure of composition.

Major Requirements and Course Descriptions

3005. ORAL COMMUNICATION: SPEAKING AND LISTENING. (4 cr; prereq 1106 or equiv)

Dialogues, group discussions, simulated situational conversations, interviews, skits, debates based on themes from audio and video tapes, records, speakers from Spain and Spanish America. Emphasis on fluency in speaking and understanding oral expression.

3021. ADVANCED COMMUNICATION SKILLS.

(5 cr; prereq 10 cr from 3001-3005 series or #)
Polishing of all areas of language skills to achieve maximum level of fluency and accuracy in Spanish.

3022. BUSINESS SPANISH. (4 cr; prereq 2 yrs Spanish or #; offered through Extension)

Vocabulary of Spanish business terms, skills in report writing, proper format for business communications, conversational fluency on trade-related topics.

3104. THE ART OF READING LITERARY TEXTS. (4 cr; prereq 3002)

Critical reading of Spanish and Spanish-American texts; works representing principal genres—novel, drama, poetry, essay; diverse approaches to literature. Terminology of criticism, literary problems and techniques.

3211. SPANISH LITERATURE: ASPECTS OF PROSE AND FICTION. (4 cr; prereq 3104)

Representative novels and essays from the golden age to modern times: the picaresque novel, the short novella of Cervantes, Gracián, historical and *costumbrista* prose, realism, surrealism, existentialism.

3212. SPANISH LITERATURE: ASPECTS OF POETRY. (4 cr; prereq 3104)

Poetry of various periods: medieval romance and epic poems, goliardic verse, ballads, love sonnets, mystical poetry, 19th-century romantic verse, modern surrealist and imagist works.

3213. SPANISH LITERATURE: ASPECTS OF DRAMA. (4 cr; prereq 3104)

The theory and practice of drama as reflected in tragedy, comedy, historical plays, farce, and religious drama.

3251. SPANISH-AMERICAN LITERATURE: ASPECTS OF PROSE AND FICTION. (4 cr; prereq 3104)

Clusters of representative works. Trends, themes, and structures from colonial times to the present. Historical comprehension of Spanish-American society through prose fiction.

3252. SPANISH-AMERICAN LITERATURE: ASPECTS OF POETRY. (4 cr; prereq 3104)

National and international literary, social, and political movements as reflected in Spanish-American poetry. Major 20th-century poets such as Vallejo, Neruda, N. Guillén, and Paz.

3253. SPANISH-AMERICAN LITERATURE: ASPECTS OF DRAMA. (4 cr; prereq 3104)

Spanish-American national drama from the 19th century to the present. Aesthetic trends and problems in relation to society.

3254. LATIN AMERICAN WRITING: BUILDING THE NATION. (4 cr; prereq 3104)

Analysis of the uses of writing by the liberal bourgeoisie in 19th-century Spanish America to promote its nation-building project. Analysis of major works in the period.

3255. VANGUARD, SOCIETY AND WRITING IN LATIN AMERICA. (4 cr; prereq 3104)

Lyric and narrative trends in 20th-century Latin America. Latin America and the decline of the West. The challenge to modernization and the internationalization of discourse. The defiance to the discourse of power in the 1970s and 1980s.

3256. SPANISH AMERICAN CULTURAL DISCOURSE. (4 cr; prereq 3104)

The cultural assumptions in current modes of interpreting Spanish American reality. Representative texts are analyzed.

3501. SPANISH CIVILIZATION: ROOTS OF MODERN SPAIN AND LATIN AMERICA. (5 cr; prereq 3002)

Spain and Latin America up to the early 19th century.

3502. SPANISH CIVILIZATION: MODERN SPAIN. (5 cr; prereq 3002)

Evolution of Spanish culture from the beginnings of the new regime to the present. Conflicts between traditionalism and liberalism; Spanish artists' and intellectuals' view of Spain in the light of these conflicts.

3512. SPANISH-AMERICAN CIVILIZATION: MODERN LATIN AMERICA. (5 cr; prereq 3002)

Spanish-American civilization from 1800 to the present. Impact of independence movements on literature, art, and music. Relationship between political development and cultural phenomena in the 19th and 20th centuries. Popular culture. Folklore and the oral tradition (ballads, corridos, folktales, the lyric, others). The impact of 20th-century ideologies and technology on cultural development in Spanish-American republics.

3614. DON QUIXOTE: A STUDY OF LOST ILLUSIONS. (4 cr)

Analysis of Cervantes' *Don Quixote* and an examination of its reception from early 1600s to modern times. Book's reception in Spanish America. Taught in English.

3620. TOPICS: SPANISH-AMERICAN LITERATURE IN TRANSLATION. (4 cr per qtr [12 cr max])

Latin American groups of writers, universal themes, literary motifs, relationships between literature and other disciplines. Topics specified in *Class Schedule*. Taught in English.

3701. STRUCTURE OF SPANISH AND PORTUGUESE: PHONOLOGY. (4 cr; prereq 3001 or #)
Introduction to the phonology of modern Spanish and Portuguese. Regional and social variants of the languages in Spain, Portugal, and Latin America.

3702. THE STRUCTURE OF SPANISH: MORPHOLOGY AND SYNTAX. (4 cr; prereq 3004 or #)
Introduction to the morphology and syntax of modern Spanish. Survey of derivational and inflectional morphology; typical syntactic constructions.

3721. ORIGINS AND HISTORY OF SPANISH AND PORTUGUESE. (4 cr; prereq Span 3021 or Port 3003)
Principal stages in growth and development of Spanish and Portuguese languages as expressions of specific cultures. Fundamental concepts and methodology of Iberian historical linguistics.

3730. TOPICS IN HISPANIC LINGUISTICS. (4 cr per qtr [12 cr max]; prereq 3004 or #)

3910. TOPICS IN SPANISH PENINSULAR LITERATURE. (4 cr per qtr [12 cr max]; prereq 3104 or #)
Focuses on a central theme related to important groups of writers, literary movements, trends, critical approaches, and methods. Topics specified in *Class Schedule*.

3920. TOPICS IN SPANISH-AMERICAN LITERATURE. (4 cr per qtr [12 cr max]; prereq 3104 or #)
For description, see 3910.

3940. FIGURES IN SPANISH PENINSULAR LITERATURE. (4 cr per qtr [12 cr max]; prereq 3104 or #)
One major writer or group of writers whose work has had an impact on thought, literature, or social problems. Figures specified in *Class Schedule*.

3950. FIGURES IN SPANISH-AMERICAN LITERATURE. (4 cr per qtr [12 cr max]; prereq 3104 or #)
For description, see 3940.

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq Δ)
Guided individual reading or study.

3973. MAJOR PROJECT. (2 cr; prereq #)
Guided individual project for Spanish majors. Used to fulfill graduation requirements. Office of undergraduate studies has details.

5015. METHODS OF TRANSLATION. (4 cr; prereq 10 cr from 3001-3005 series or #)
Meaning, use, and theories of translation. Techniques and problems of translation from Spanish and Portuguese to English and vice versa. Translation patterns, use of special vocabularies and other adjuncts needed to understand both languages. Practical vocabulary and usage for various fields of work.

5106. THE LITERATURE OF THE RECONQUEST AND FEUDAL SPAIN. (4 cr; prereq three 3xxx or 5xxx Spanish or Portuguese literature courses)
Major literary works and genres of medieval Spain—from primitive lyric to *La Celestina*—examined against background of social and historical transformations of period.

5107. THE LITERATURE OF THE SPANISH EMPIRE AND ITS DECLINE. (4 cr; prereq three 3xxx or 5xxx Spanish or Portuguese literature courses)
Overview of major 16th- and 17th-century Renaissance and Baroque works—poetry, nonfiction, prose, novel, drama—examined against background of establishment of Spanish Empire, internal economic crisis, and ideological apparatus developed by the modern state.

5108. THE SPAIN OF CERVANTES' DON QUIXOTE: HISTORY AND FICTION. (4 cr; prereq three 3xxx or 5xxx Spanish or Portuguese literature courses or Δ)
Historical function of literary techniques, narrative perspectives, and ironic discourse of Cervantes' major work during the period of imperial decadence, 17th century. Tradition of Erasmian folly, madness as anachronism and social satire.

5109. THE LITERATURE OF BOURGEOIS ORDER: ENLIGHTENMENT, ROMANTICISM, AND POSITIVISM. (4 cr; prereq three 3xxx or 5xxx Spanish or Portuguese literature courses)
Overview of major literary works—poetry, essay, novel, drama—and of literary movements of 18th and 19th centuries, examined as aesthetic expressions of the long process of consolidation of bourgeois social order in Spain.

5111. THE LITERATURE OF THE SPANISH CRISIS OF THE 20TH CENTURY. (4 cr; prereq three 3xxx or 5xxx Spanish or Portuguese literature courses)
Overview of major literary works and aesthetic trends from Spanish-American War of 1898 to post-Franco period, examined in terms of social, political, and intellectual crisis.

5221. SPANISH LITERATURE OF THE 17TH CENTURY: THE DRAMA. (4 cr; prereq three 3xxx or 5xxx Spanish or Portuguese literature courses or Δ)
Representative playwrights—Lope, Alarcón, Tirso, Calderón—and dramatic forms, especially comedia, tragedy, and *auto sacramental*. Approaches to golden age comedia. Themes of honor, purity of blood, country vs. city, free will, others, viewed against literary, cultural, and social history.

5234. FEMINISM AND LITERATURE IN SPAIN. (4 cr; prereq three 3xxx or 5xxx literature courses in Spanish or Portuguese or Δ)
Study of Spanish feminism in thought and practice, with a focus on literature, cultural discourse, and literary theory.

Major Requirements and Course Descriptions

5272. HISPANIC MODERNISM. (4 cr; prereq three 3xxx or 5xxx literature courses in Spanish or Portuguese or Δ)

A critical purview of artistic and literary production in Hispanic cultures since the middle of the 19th century to the *avant-gardes*. *Modernity and modernization* in Hispanic world. The Spanish generation of 98. Castilian, Catalan, and Latin-American practices.

5316. THE PICARESQUE NOVEL. (4 cr; prereq three 3xxx or 5xxx Spanish or Portuguese literature courses or Δ)

Major picaresque narratives—*Lazarillo*, *Guzmán*, *Buscón*, Cervantes' *Pícaros*, *Estebanillo González*—in relation to Spanish ambience, Western tradition, European novel, realism. Literary autobiography, episodic structure, themes of roguery, delinquency, sin, marginality, social criticism, moral preoccupations. Comparison to European counterparts.

5525. CARIBBEAN LITERATURE: AN INTEGRAL APPROACH. (4 cr; prereq three 3xxx or 5xxx Spanish or Portuguese literature courses or Δ)

Review of literature of area; common traits and preoccupations. Conceptualization of region as a totality: themes, similar lines of development, generic tendencies, periods of development and crisis.

5526. CREOLE CONSCIOUSNESS AND MERCANTILIST CULTURE. (4 cr; prereq three 3xxx or 5xxx Spanish or Portuguese literature courses or Δ)

Analysis of texts written between 1492 and 1780; the sociohistorical project to which the texts belong. Generic variants and approach to changing reality.

5527. NATIONAL LITERARY CONSCIOUSNESS AND FREE TRADE. (4 cr; prereq three 3xxx or 5xxx Spanish or Portuguese literature courses or Δ)

Analysis of literary movements between 1780 and 1900; reflection of process of formation of nation-states and incorporation of Latin America into international capitalist system as producer of foodstuffs and raw materials and importer of manufactured goods.

5528. POPULAR LITERARY CONSCIOUSNESS 1900-1950. (4 cr; prereq three 3xxx or 5xxx Spanish or Portuguese literature courses or Δ)

Spanish-American literature between eve and aftermath of the two world wars. Impact of modernization, industrialization, and nationalistic and populist thought on emergence of a distinctive style of writing, thematic trends, and conventions of literary genre.

5529. NATIONAL AFFIRMATION AND TRANSNATIONALIZATION. (4 cr; prereq three 3xxx or 5xxx Spanish or Portuguese literature courses or Δ)

Analysis of literary trends from 1950 to present. Reaction to internal social demands for development of independent national cultures and conflicting influence of international economic system.

5531. HISPANIC LITERATURES OF THE UNITED STATES. (4 cr; prereq three 3xxx or 5xxx Spanish or Portuguese literature courses or Δ)

Introduction to literary texts in Spanish produced by the Hispanic population of the United States. Focus on the expanding corpus of Mexican-American and Puerto Rican literature and its relation to the literary production of the larger Hispanic world.

5532. LITERATURE AND NATIONAL DISINTEGRATION. (4 cr; prereq three 3xxx or 5xxx literature courses in Spanish or Portuguese or Δ)

Literary reaction to the contemporary structural changes in the world economic system (1970 to present). Effects on literature as institution. Texts related to revolutionary trends and social movements (feminism, theology of liberation, defense of human rights).

5533. LATIN AMERICAN CULTURAL DISCOURSE. (4 cr; prereq three 3xxx or 5xxx literature courses in Spanish or Portuguese or Δ)

Study of contemporary discourses that attempt global explanations of the development of Latin American culture and civilization: liberal diffusion, dependency theory, geopolitics, doctrine of national security, theology of liberation, human rights.

5535. HISPANIC AMERICAN LITERARY HISTORY: AN OVERVIEW. (4 cr; prereq three 3xxx or 5xxx literature courses in Spanish or Portuguese or Δ)

Purview of Hispanic-American literature from colonial times to present. Major cultural/historical divisions will be analyzed and characterized. A variety of historiographical approaches to the field will be recognized.

5536. FEMINISM AND LITERATURE IN LATIN AMERICA. (4 cr; prereq three 3xxx or 5xxx literature courses in Spanish or Portuguese or Δ)

Study of feminist action and theory in Latin America with a focus on literature and literary theory.

5701, 5702. HISTORY OF IBERO-ROMANCE. (4 cr per qtr; prereq 3701 or 3702 or #)

Comparative study of origins and development of Ibero-Romance languages; evolution of Catalan, Portuguese, and Spanish compared and contrasted. Methods in reading and analyzing non-literary and literary medieval texts.

5711. THE STRUCTURE OF MODERN SPANISH: PHONOLOGY. (4 cr; prereq 3701, Ling 5302 or #)

Analysis and description of the structure of Spanish. Useful for students who plan to teach Spanish and for those whose primary language is Spanish. Formulation and evaluation of phonological descriptions of Spanish. Approaches to problems in Spanish phonology within metrical, autosegmental, and lexical phonological theories.

5712. THE STRUCTURE OF MODERN SPANISH: MORPHOLOGY. (4 cr; prereq 3702, Ling 5302 or #)
Analysis and description of the structure of Spanish. Useful for students who plan to teach Spanish and for those whose primary language is Spanish. Evaluation of morphological theories and descriptions of Spanish: of the lexicon, derivation, inflection, grammatical categories; examination of phonological and syntactic effects on morphology.

5713. THE STRUCTURE OF MODERN SPANISH: SYNTAX. (4 cr; prereq 3701, Ling 5302 or #)
Analysis and description of the structure of Spanish. Useful for students who plan to teach Spanish and for those whose primary language is Spanish. Introduction to linguistic types that appear across languages, such as grammatical relations, word order, transitivity, causative constructions, relative clauses; how these phenomena are present in syntax of Spanish.

5714. THE STRUCTURE OF MODERN SPANISH: SEMANTICS. (4 cr; prereq 5713)
Relationship between syntax and semantics. Application of structural semantics to the Spanish language, concepts of semantic and lexical fields. Cultural patterns in Hispanic world as reflected in semantic structures. Theories of meaning, euphemisms; taboos; semantics and social class. Semantic approaches to literary analysis.

5715. THE STRUCTURE OF MODERN SPANISH: PRAGMATICS. (4 cr; prereq 5713 or #)
Introduction to concepts used in current literature in Spanish pragmatics.

5721. INTRODUCTION TO ROMANCE PHILOLOGY. (4 cr, \$Port 5721; prereq 3721 or #)
Comparative view of the origins and development of Romance languages. Effects of language change on the Romance languages, examined individually and as a group; medieval texts surveyed in terms of time, place, and cultural setting.

5729. SPANISH DIALECTOLOGY: INTRODUCTION. (4 cr; prereq 5711, 5712, 5713)
History, principles, and theories of dialectology as they relate to descriptive study of Spanish. Linguistic geography and delineation of national and social dialects.

5731. SPANISH DIALECTOLOGY: REGIONAL AND SOCIAL DIALECTS OF MODERN SPAIN. (4 cr; prereq 5729 or #)
Major dialect areas of Spain; distinguishing phonological, morphological, lexical, and syntactic variations. Impact of recent cultural, political, and socioeconomic transformations on the language.

5732. SPANISH DIALECTOLOGY: REGIONAL AND SOCIAL DIALECTS OF MODERN SPANISH AMERICA. (4 cr; prereq 5729 or #)
Major dialect areas in modern Hispanic America. Norm, speech, and language related to former political and religious divisions of Hispanic America and to new national boundaries.

5910. TOPICS IN SPANISH PENINSULAR LITERATURE. (4 cr; prereq 3104 or SpPt 3104 or Δ)
Important groups, movements, trends, methods, genres. Topics may include conversos, mysticism, poesia tradicional, essay and enlightenment, novela realista, and avant-garde. Topics specified in *Class Schedule*.

5920. TOPICS IN SPANISH-AMERICAN LITERATURE. (4 cr; prereq 3104 or SpPt 3104 or Δ)
Important groups, movements, trends, methods, genres. Topics specified in *Class Schedule*.

5940. FIGURES IN SPANISH PENINSULAR LITERATURE. (4 cr [12 cr max]; prereq 3104 or SpPt 3104 or Δ)
One major writer or group of writers whose work has had an impact on thought, literature, or social problems. Figures may include Alfonso X, Cervantes, Quevedo, Larra, Unamuno, and Lorca. Figures specified in *Class Schedule*.

5950. FIGURES IN SPANISH-AMERICAN LITERATURE. (4 cr; prereq 3104 or SpPt 3104 or Δ)
One major writer or group of writers whose work has had an impact on thought, literature, or social problems. Figures specified in *Class Schedule*.

5985. THE STUDY OF SPANISH IN THE UNITED STATES: THEORY AND FIELD METHODS. (4 cr; prereq 3701)
Sociolinguistic theory and field methods related to the study of Spanish in the United States; field experience in the Hispanic community of St. Paul.

5990. DIRECTED RESEARCH. (1-5 cr per qtr; prereq Δ)

Portuguese (Port)

1001-1002-1003. BEGINNING PORTUGUESE.
cr per qtr; prereq for 1002—1001 or #, prereq for 1003—1002 or #)
Speaking and understanding Portuguese; pronunciation (Brazilian speech stressed); writing and reading skills; grammar; cultural aspects of language and civilizations of Portuguese-speaking world.

1004. INTERMEDIATE PORTUGUESE GRAMMAR AND COMPOSITION.
cr; prereq 1003)
Speaking and comprehension; development of reading and writing skills based on Portuguese-language materials.

1005. INTERMEDIATE PORTUGUESE.
cr; prereq 1004)
Speaking and comprehension; development of reading and writing skills grounded in materials that reflect the cultural diversity of the Portuguese-speaking world. Grammar review.

Major Requirements and Course Descriptions

1006. INTERMEDIATE PORTUGUESE. (5 cr; prereq 1005)

Speaking and comprehension; development of reading and writing skills on materials from Portugal and Brazil. Grammar review; composition and short presentation.

3001. PORTUGUESE FOR SPANISH SPEAKERS.

(5 cr; prereq knowledge of Spanish or #; offered through Extension)

Study of Portuguese based on student knowledge of Spanish (speakers of other Romance languages admissible with permission of the instructor). Contrastive approach to the phonic and morpho-syntactic structures of Portuguese.

3003. CONVERSATION AND COMPOSITION.

(5 cr; prereq 1006 or equiv)

Speaking and writing skills. Cultural comparisons, current events. Grammar review. Writing workshops.

3501. FOUNDATIONS OF LUSOPHONE CULTURES. (5 cr; prereq 1106)

Foundations of Portuguese-language cultures from origins to present. Social and cultural currents that lay basis for modern Portuguese-speaking world.

3502. BRAZILIAN CULTURE. (5 cr; prereq 1106)

Introduction to Brazilian contemporary culture and society. History, culture, and social problems.

3602. INTRODUCTION TO BRAZIL. (4 cr)

Brazilian contemporary culture and society. History, culture (music, art, cinema, literature, architecture, theatre, popular culture, television), and social problems (ethnicity, rain forest).

3603. BRAZILIAN LITERATURE IN TRANSLATION. (4 cr)

Representative figures or topics of Brazilian literature as reflection of Brazilian society. Modern Brazilian fiction. Topics specified in *Class Schedule*. In English.

3910. TOPICS IN LUSO-BRAZILIAN LITERATURE. (4 cr per qtr; prereq Span 3104 or #)

Sample topics: Portuguese lyric poetry; the Portuguese social novel; contemporary Portuguese literature; the Brazilian novel; recent currents in Brazilian poetry. Topics specified in *Class Schedule*.

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq Δ)

Guided individual reading or study.

5110. TOPICS IN PORTUGUESE LITERATURE.

(4 cr per qtr [12 cr max]; prereq 3211 or 3212 or 3213 or three 3xxx or 5xxx Spanish literature courses, Δ) Important authors, movements, currents, genres, socio-aesthetic questions, literary techniques. Topics specified in *Class Schedule*.

5521. LITERATURE IN TRADITIONAL/EXPANSIONIST PORTUGAL. (4 cr; prereq three 3xxx Portuguese courses or Δ)

Analysis of key literary movements and figures to about 1750. Literature as a dimension of a sociocultural movement involving modulations of traditionalist social formations and accommodation of overseas expansion.

5522. LITERATURE AND LIBERAL PROBLEMS IN PORTUGAL. (4 cr; prereq three 3xxx Portuguese courses or Δ)

Analysis of key literary movements and figures from about 1750 to present. Literature as a dimension of a sociocultural movement involving emulation and then various reconstitutions of society in attempts to "modernize."

5523. NATIONALISM IN BRAZILIAN LITERATURE. (4 cr; prereq three 3xxx Portuguese courses or Δ)

Major literary works—poetry, novel, essay, or drama—and literary trends from the colonial period and/or the 19th century as expressions of the nativist/nationalistic project in Brazil.

5524. BRAZILIAN LITERATURE AND MODERNIZATION. (4 cr; prereq three 3xxx Portuguese courses or Δ)

Major literary works—poetry, novel, essay, memoir, or drama—and literary trends from the 20th century as expressions of the modernization process of Brazilian society, for creation and stabilization of an independent economic and cultural entity.

5721. TOPICS IN PORTUGUESE LINGUISTICS. (4 cr §Span 5721; prereq Span 3721 or #)

Descriptive analysis (synchronical or diachronical) of aspects of Portuguese language. Portuguese dialectology. In Portuguese.

5910. TOPICS IN LUSO-BRAZILIAN LITERATURE. (4 cr; prereq Span 3104 or Span-Port 3104 or #)

Portuguese literature, music, film, oral traditions, and TV. Topics specified in *Class Schedule*.

5920. FIGURES IN LUSO-BRAZILIAN LITERATURE. (4 cr; prereq Span 3104 or Span-Port 3104 or #)

Introduces Portuguese, Brazilian, or other major lusophone writers, whose work has had impact on thought, literature, or social problems. Figures specified in *Class Schedule*.

5990. DIRECTED RESEARCH. (1-5 cr per qtr; prereq Δ)

Spanish-Portuguese (SpPt)

3801. HONORS SEMINAR. (4 cr; prereq 20 cr toward major including 3104, dept honors candidate or #)

Theory and practice of humanistic scholarship. Student works with a faculty member on a research paper or thesis.

3980. DIRECTED INSTRUCTION. (1-4 cr per qtr [8 cr max]; prereq #, Δ; S-N only)

Undergraduates serve as teaching assistants in courses they have successfully completed for credit.

5930. SELECTED TOPICS IN THE HISPANIC CULTURAL DISCOURSES. (4 cr; prereq reading knowledge of Spanish and Portuguese)

Comparative topics in cultural discourses of Portuguese-speaking and Spanish-speaking nations. Common background and differences among Iberian or Latin American intellectual production. In Portuguese.

Speech-Communication (Spch)

Staff—Chair, Donald R. Browne, 460 Folwell Hall; *Undergraduate Advising Office,* 432 Folwell Hall

Professor Emeritus: Howell

Professors: Bormann, Browne, Campbell (on leave fall 1992), Goldstein, Hewes, Jensen, Miller, Poole, Scott, Shapiro, Sykes

Associate Professors: Albert, Rarick

Assistant Professors: Omdahl, Peck

Speech-communication involves the study of the communicative dimensions of human experience using both humanistic and social scientific methods. The department sees the various forms of human communication as integrated and interdependent activities. As such, students are encouraged to select a variety of coursework within departmental offerings in rhetoric, electronic media, and interpersonal and organizational communication.

Majors are encouraged to participate in the social and educational activities of the Undergraduate Speech-Communication Association.

General Education—The department recommends as courses for nonmajors 1101, 1102, 3211, 3401, 3411, 3431, 3605, 5231, 5261, 5402, 5431, 5615, 5617.

Study Abroad—The department encourages students to incorporate study abroad experiences into their major program. Spch 3451 is a useful introduction to such an experience, but it is not a requirement. Credit arrangements and project plans should be cleared with a senior faculty member before departure. For information on study abroad options and procedures, see Foreign Study.

B.A. Major Sequence

Required Preparatory Courses—1101, 1102

Major Requirements—Minimum of 36 3xxx-5xxx cr in speech-communication, to include: 3211, 3401, 3601 (may not include 3970, 3980, or X registrations)

Also, two courses at 3xxx level in composition, as well as research requirement: Speech 3501 *or* an out-of-department course in research methods (a list of courses is available in the department's Undergraduate Advising Office, 432 Folwell Hall). The composition and research requirements are *in addition to* the minimum of 36 3xxx-5xxx cr in speech-communication.

In order to qualify for major status, students must first take Spch 1101, 1102, 3211, 3401, and 3601, with an overall GPA of 2.50. Students wishing to emphasize speech-communication in IDIM, BIS, UWW, and other individually designed programs must achieve a 2.50 GPA in any two of the four courses listed above.

The program must be planned in conference with and approved by a departmental major adviser.

Minor Sequence

Required Preparatory Courses—1101, 1102

Minor Requirements—Minimum of 20 3xxx-5xxx cr in speech-communication, including two courses from 3211, 3401, 3601

Major Requirements and Course Descriptions

1101f,w,s,su. FUNDAMENTALS OF SPEECH-COMMUNICATION: ORAL COMMUNICATION. (4 cr)

Oral communication processes and elements. Criticism of and response to oral discourse. Individual speaking.

1102f,s,su. FUNDAMENTALS OF SPEECH-COMMUNICATION: COMMUNICATION PROCESS. (4 cr)

Introduction to communication theory and research, focusing on interpersonal, intercultural, group, and family settings.

1313f,w,s,su. ANALYSIS OF ORAL ARGUMENT. (4 cr)

Strategies for analyzing and evaluating arguments received aurally. Problems in listening and responding to argument.

3111w. LEADERSHIP COMMUNICATION. (4 cr) Shapiro

Interdisciplinary study of theory and practice of leadership. Theoretical approaches to management. Interpersonal communication skills in leadership practice; persuasion and cross-value communication in effective leadership. Experience in task-oriented small group communication.

3191f, 3192w, 3193s. HONORS COURSE: TUTORIAL SEMINAR IN SPEECH. (4 cr per qtr; prereq honors candidate in speech-communication, #, Δ)

3201f,w,s,su. INTRODUCTION TO BROADCASTING PRODUCTION. (4 cr)

Practice and theory. Projects in performance and scripting; studio equipment and procedures.

3211. DETERMINANTS OF BROADCAST PROGRAMMING. (4 cr) Browne, Peck, Rarick

Historical development and contemporary aspects of broadcast programming. How governmental, industrial, and public organizations influence program decisions. "Problem" areas of programming.

3291. BROADCASTING AND NEW TELECOMMUNICATION MEDIA. (4 cr; prereq 3211 or #) Rarick

Development and current status of new telecommunication media such as cable TV, satellites, DBS, MDS, and video disk/cassettes. Technology, historical development, regulation, and programming of these media and their influence on broadcasting.

3401. THEORIES OF PERSON TO PERSON COMMUNICATION. (4 cr; prereq 1102 or #, Psy 1001)

Hewes, Kroll, Omdahl, Sykes
Social scientific perspectives on talk. Review of variable analytic, covering-law, pragmatic, and rules-based theories of conversation in human relationships.

3402. COMMUNICATION IN RELATIONSHIPS. (4 cr; prereq 1102) Hewes

Communicative interactions between individuals in acquaintance, friendship, work, and significant ongoing relationships from onset to termination.

3411f,w,s,su. SMALL GROUP COMMUNICATION PROCESSES. (4 cr; prereq 1101 or #)

Cooperative thinking in task-oriented groups. Planning, preparing for, and participating in small groups in private and public contexts.

3431. THE ROLE OF PERSUASION IN THE MODERN WORLD. (4 cr; soph standing recommended)

Persuasion in interpersonal, organizational, intracultural, and intercultural relationships. Contemporary persuasion, with occasional historical segments.

3441f,w,s. COMMUNICATING IN ORGANIZATIONS. (4 cr; prereq 1101 or 1102 or equiv)

Theory and practice of communicating in organizations. How communication creates, maintains, and changes organizational culture. Role of individual communicator in organizational culture.

3451. INTERCULTURAL COMMUNICATION: THEORY AND PRACTICE. (4 cr; prereq planning an intercultural experience)

Theories of and factors influencing intercultural communication. Development of effective intercultural communication skills.

3452. COMMUNICATION AND THE INTERCULTURAL REENTRY. (4 cr; prereq return from an intercultural experience)

Communication processes during return to home culture after intercultural experience. Focus on communication and understanding impact of intercultural experience as the basis for social change.

3501. INTRODUCTION TO COMMUNICATION RESEARCH METHODS. (4 cr; prereq 3401) Omdahl, Poole

Quantitative research methods in speech-communication, including design of communication experiments, surveys, interaction coding, content analysis, observational research, and relevant statistical methods.

3601. APPROACHES TO PUBLIC DISCOURSE. (4 cr; prereq 1101) Campbell, Scott

Theoretical systems intended to explain or direct the creation of public discourse. Traditional rhetoric to contemporary perspectives. Using theory to explain the practice of public discourse.

3605f,w,s,su. PERSUASIVE SPEAKING. (4 cr; prereq 1101)

Persuasive speeches: directed practice. Public speaking in contemporary life.

3615. ARGUMENTATION. (4 cr; prereq 1101 or #) Jensen

Role of reasoned discourse in interpersonal, public, and mass communication.

3625. ETHICAL STANDARDS IN MODERN COMMUNICATION. (4 cr; prereq 1101 or #) Jensen

Ethical issues in interpersonal communication, small group discussion, public speaking, and mass communication.

3970f,w,s,su. DIRECTED STUDIES. (Cr ar [no major program cr for speech-communication majors]; prereq at least one speech-communication course, #, Δ)
Guided individual reading or study.

3980f,w,s,su. DIRECTED INSTRUCTION. (1-4 cr per qtr [8 cr max; no major program cr for speech-communication majors]; prereq #, Δ; S-N only)
Supervised planning and teaching of undergraduate courses.

5110. ADVANCED TOPICS IN SPEECH-COMMUNICATION THEORY. (4 cr per qtr [may be repeated for cr with #]; prereq 3211, 3401, 3601 [whichever is relevant to the topic])

Advanced theoretical problems. See department office for current offering.

5211. CONTEMPORARY PROBLEMS IN AMERICAN BROADCASTING. (4 cr; prereq 3211, 3r)

Browne, Peck, Rarick

Problems affecting American commercial and educational broadcasting. Cable television, prime-time television programming, violence on television, management issues, regulatory agencies.

5222. EDUCATIONAL TELEVISION PROGRAMMING AND ADMINISTRATION. (4 cr; prereq 3211 or #) Goldstein

Television applied to educational needs; current practices; significant research findings; relative effectiveness of differing types of television use; impact of various modes of transmission on programming and administrative concepts.

5231. COMPARATIVE BROADCAST SYSTEMS. (4 cr; prereq 3211 or #) Browne

Historical, sociological, and political aspects of systems of broadcasting throughout the world—American, Canadian, British, French, German, Russian/Commonwealth of Independent States, others. Regulation, impact on political, social, and economic development.

5232. INTERNATIONAL BROADCASTING. (4 cr) Browne

International broadcasting in the United States, Great Britain, Russia/Commonwealth of Independent States, Japan, and other countries. Theories of informing and persuading through direct broadcast and exchange of programs; regulatory agreements; spectrum control; social and legal implications of broadcasting via satellite.

5233. BROADCASTING AND NATIONAL DEVELOPMENT. (4 cr) Browne

Use of radio and television to effect changes in social, political, economic, and cultural life. Use by developing nations to improve agricultural practices, hygienic standards, literacy, awareness of civic responsibility.

5261. THE COMMUNICATIVE PROCESSES OF TELEVISION. (4 cr; prereq 3211 or #) Peck

Television as a system of communicative processes: the organizational processes of televised communicators, television content as a link between communicators and viewers, and how viewers use television.

5281. BROADCASTING AUDIENCE ANALYSIS AND PROGRAMMING. (4 cr; prereq 3211) Rarick
Methods of measuring and analyzing radio and television audiences. Structure and appeals of program formats. Strategies in programming and scheduling. Critical perspectives on audience estimates.

5401. ADVANCED THEORIES OF COMMUNICATION. (4 cr; prereq 3401 or grad) Sykes

Analysis of theories of communication and their usefulness for particular purposes. Historical and conceptual development of theories of communication.

5402. PROBLEMS IN INTERPERSONAL COMMUNICATION. (4 cr; prereq 3401 or #) Shapiro

Factors contributing to misunderstanding, not understanding, disagreement, and cessation of contact in dyads.

5403. THEORY CONSTRUCTION AND ANALYSIS IN COMMUNICATION. (4 cr; prereq 3401 or #) Hewes, Omdahl, Sykes

Problems in development of communication theory. Analysis of existing theory. Relationship of theory to research.

5404. LANGUAGE, CULTURE, AND EDUCATION. (4 cr, §SeEd 5404; prereq 1102, 3401 or #)

Psychological and social-psychological perspectives for study of language-communication; language variation (dialects, codes, registers); implications for program development and instructional practices.

5405. NONVERBAL COMMUNICATION: THEORY AND RESEARCH. (4 cr) Omdahl, Sykes

Nonverbal interpersonal communication. Nonverbal categories: gesture, facial expression, posture, clothing, environment.

5407. COMMUNICATION AND INTERPERSONAL CONFLICT. (4 cr; prereq 3401, 3411) Poole

Theory and research on the role of communication in conflict in groups, organizations, and interpersonal relationships. Communication in negotiations. Interventions into interpersonal conflicts.

5411. SMALL GROUP COMMUNICATION THEORY. (4 cr; prereq 3411 or #) Bormann, Hewes, Poole

Theories of communication within the small, task-oriented group. Group cohesiveness, leadership, role structure, information processing, decision making.

Major Requirements and Course Descriptions

5414su. AUTHORITY AND POWER IN TASK-ORIENTED COMMUNICATION. (4 cr; prereq 3411 or #; S-N only) Shapiro

Authority and power in task-oriented groups. Tavistock-type small group, intergroup, and large group laboratory experiences. Verbal and nonverbal processes in and among groups that affect leadership and followership.

5421. QUANTITATIVE RESEARCH IN COMMUNICATION. (4 cr; prereq 3401 or 5403 or #) Hewes, Omdahl, Poole, Rarick, Sykes

Experimental and descriptive research; design and procedures; individual projects.

5422. INTERVIEWING AND COMMUNICATION.

(4 cr; prereq 1101, 6 cr social sciences or #) Rarick
Theory and practice in the information interview. Interpersonal perception, empathy, and cognitive structure in dyadic communication. Experience in interviewing and communication analysis. Research in interpersonal and mass communication.

5431. THE PROCESS OF PERSUASION. (4 cr; prereq 1102, 3431) Albert, Scott

Modern motivational communication. Social control through persuasive speech.

5441. COMMUNICATION IN HUMAN ORGANIZATIONS. (4 cr; prereq 3401 or 8 cr social sciences, 3441 or #) Kroll, Poole, Shapiro

Communication in organizational settings. Organizational structure and dynamics and their effect upon the communication process. Individual projects.

5442. ANALYSIS OF ORGANIZATIONAL COMMUNICATION. (4 cr; prereq 5441) Poole

Methodological approaches to analyzing organizational communication. Application and theoretical foundations of survey (communication audits and communication flow), interpretive, and message analysis techniques.

5443. THEORIES OF ORGANIZATIONAL COMMUNICATION. (4 cr; prereq 3401, 3441 or #) Poole

Survey of theories of organizational communication and relevant empirical research. Implications of these theories for modern organizations, their members, and society.

5451. PROCESSES OF INTERCULTURAL COMMUNICATION. (4 cr; prereq 3401, Anth 1102 or another cultural anthropology course or #) Albert

Successful interpersonal communication across cultures. Linguistic and nonverbal variables. Emphasis on North Americans abroad, communication with host nationals.

5452. WORKSHOP IN INTERCULTURAL COMMUNICATION. (4 cr; prereq 5451 or #; S-N only) Albert

Small group training for foreign and U.S. students in communicating across cultures; group discussions, role playing, simulations, lectures as methods.

5602. CONTEMPORARY POLITICAL PERSUASION. (4 cr; prereq 1101, 5431 or #) Bormann, Campbell, Scott

Contemporary political speech. Ideologies in political persuasion.

5607. RHETORIC IN ASIA. (4 cr; prereq 3601 or #) Jensen

Survey of ancient roots of rhetoric in Buddhist, Confucian, and other religious/cultural contexts; study of public speaking in East Asia since World War II; study of cross-cultural studies dealing with East Asian contexts.

5611. CLASSICAL RHETORIC. (4 cr; prereq 1101) Scott

Greek and Roman theories of speechmaking; historical and philosophical context and influence on education.

5613. EXPLORATIONS INTO ARGUMENTATION. (4 cr; prereq 1101 or 1313 or #) Jensen

Argumentation in a variety of contexts: law, science, management, religion, diplomacy, political campaigning, art, informal conversation, and folk literature; surveying issues in collegiate debate and contributions in argumentation theory.

5615. INTRODUCTION TO RHETORICAL CRITICISM. (4 cr; prereq 1101; 3601 recommended) Campbell, Scott

Traditional and contemporary rhetorical theory; application to contemporary public address.

5616. PUBLIC ADDRESS IN BRITAIN AND THE COMMONWEALTH. (4 cr; prereq 1101 or #) Jensen
British orators—works and historical settings 1750 to present. British rhetorical theory.

5617. HISTORY AND CRITICISM OF AMERICAN PUBLIC ADDRESS. (4 cr; prereq 1101, Psy 1001) Bormann

History and criticism of religious and reform speech in the United States, 1620 to 1920.

5618. HISTORY AND CRITICISM OF AMERICAN PUBLIC ADDRESS. (4 cr; prereq 1101, Psy 1001) Bormann

History and criticism of political speech in the United States from the Revolution to the present.

5621. WOMAN'S RIGHTS/WOMAN SUFFRAGE RHETORIC. (4 cr; prereq 5615 or #) Campbell

History and criticism of the rhetoric of the woman's rights/woman suffrage movement in the United States, 1835-1926.

5622. CONTEMPORARY FEMINIST RHETORIC. (4 cr; prereq 5615 or #) Campbell

History and criticism of the rhetoric of the contemporary feminist movement in the United States, 1945-present.

5625. ISSUES IN COMMUNICATION ETHICS.

(4 cr; prereq 3625 or #) Jensen
Exploring ethical issues of interpersonal, small group, public, and mass communication, emphasizing the communicator, the receiver, the message, the medium, the situation, and the effects.

5970f,w,s,su. DIRECTED STUDIES. (Cr ar; prereq 9 3xxx-5xxx speech-communication cr, #, Δ)
Guided individual reading or study.

Statistics (Stat)

Staff—Director, School of Statistics, Seymour Geisser, 270 Vincent Hall; **Chair,** Department of Applied Statistics, R. Kinley Larntz, 352f Classroom-Office Building; **Chair,** Department of Theoretical Statistics, David A. Lane, 270 Vincent Hall; **Director of Undergraduate Studies,** Bernard W. Lindgren, 258 Vincent Hall; **Director of Graduate Studies,** Glen D. Meeden, 255 Vincent Hall

Professors: Berry, Bingham, Cook, Dickey, Eaton, Geisser, Hawkins, Lane, Larntz, Lindgren, Louis, Meeden, Sudderth, Tierney, Weisberg

Associate Professors: Chaloner, Martin, Oehlert

Assistant Professors: Geyer, Grund, Pruitt
Statistics, which deals with the collection, analysis, and interpretation of data, provides a logical framework for using data to draw inferences in scientific studies and for making decisions in industrial, business, and governmental enterprises.

B.A. Major Sequence

Required Preparatory Courses—Calculus through Math 1252

Major Requirements—Math 3251 and 3252

5890 and either 3011-3012 or 5021
Either 5121-5122 and at least 16 cr chosen from list of electives, or 5131-5132-5133 and at least 12 cr chosen from electives

Electives: To be selected from 5201, 5271, 5301, 5302, 5401, 5421, 5601,

5911, IEOB 5551; IEOB 5030 or 5040; CSci 3xxx; Math 5682-5683

Course selections must be approved by the director of undergraduate studies.

Courses satisfying major requirements must be taken A-F. To count toward major requirements, course grades must be C or better.

Minor Sequence

Minor Requirements—Minimum of 17 cr from 3xxx and 5xxx courses

Course selections must be approved by the director of undergraduate studies.

1001f,w,s. INTRODUCTION TO IDEAS OF STATISTICS. (4 cr; prereq high school higher algebra)
Controlled vs. observational studies; presentation and description of data; correlation and causality; sampling, accuracy of estimates; tests.

3011-3012f,w,s. STATISTICAL ANALYSIS. (4 cr per qtr; prereq college algebra)
Descriptive statistics; elementary probability; estimation; one-and two-sample tests; correlation; regression; ANOVA; randomized blocks; multiple comparisons; factorial experiments; multiple regression; goodness of fit; nonparametric methods; contingency tables; selected topics.

3091f,w,s. INTRODUCTION TO PROBABILITY AND STATISTICS. (4 cr, §5121, §5131; prereq differential and integral calculus)
Elementary probability and probability distributions, sampling and elements of statistical inference.

5021f,w,s. STATISTICAL ANALYSIS. (5 cr, §3012; prereq college algebra or #)
Intensive version of 3011-3012; primarily for graduate students needing statistics as a research technique.

5121f,w-5122w,s. THEORY OF STATISTICS. (5 cr per qtr, §5131-5132-5133; prereq Math 1253)
Univariate and multivariate distributions, law of large numbers, sampling, likelihood methods, estimation and hypothesis testing, regression and analysis of variance, confidence intervals, distribution-free methods.

5131f-5132w-5133s. THEORY OF STATISTICS. (4 cr per qtr, §5121-5122; prereq Math 3252)
5131: Probability models, univariate and bivariate distributions, independence, basic limit theorems. *5132-5133:* Statistical decision theory, sampling, estimation, testing hypotheses, parametric and nonparametric procedures for one-sample and two-sample problems, regression, analysis of variance. Treatment more mathematical than that in 5121-5122.

Major Requirements and Course Descriptions

5161f-5162w-5163s. APPLIED STATISTICAL METHODS. (4 cr per qtr, §5201, §5301, §5302, §5421; prereq ¶5131, admission to graduate study in statistics or #)

5161: Sampling methodology. Estimation from sample surveys. Simple and multiple regression. Use of statistical packages. *5162:* Advanced topics in linear regression. Nonlinear models. Generalized linear models. Categorical data analysis. Logistic regression. *5163:* Variance reduction designs for experiments. Factorial, fractional, and confounded designs. Optimal designs. Analysis of covariance. Unbalanced data analysis.

5201w. SAMPLING METHODOLOGY IN FINITE POPULATIONS. (4 cr; prereq 5021 or 5121 or 3091 or #)

Simple random, systematic, stratified, and unequal probability sampling. Ratio and regression estimation. Multistage and cluster sampling.

5271. BAYESIAN DECISION MAKING. (4 cr; prereq ¶5122 or ¶5132)

Axioms for personal probability and utility. Elements of statistical decision theory. Bayesian analysis of linear models.

5301f,s. DESIGNING EXPERIMENTS. (5 cr, §5163; prereq 3012 or 5021 or 5133 or #)

Control of variation, construction, and analysis of complete and incomplete block, split plot, factorial, and groups of similar experiments. Confounding, crossover, and optimum seeking designs.

5302f,s. APPLIED REGRESSION ANALYSIS. (5 cr, §5161; prereq 3012 or 5021 or 5133 or #)

Simple, multiple, and polynomial regression. Estimation, testing, and prediction. Stepwise and other numerical methods; examination of residuals; weighted least squares; nonlinear models; response surface. Experimental research and economic applications.

5401s. INTRODUCTION TO MULTIVARIATE METHODS. (4 cr; prereq 5133 or 5302)

Bivariate and multivariate distributions. Inference based on multivariate normal distributions. Discrimination and classification. Multivariate analysis of variance. Partial, canonical correlation and independence. Principal component analysis, factor analysis, analysis of repeated measurements, cluster analysis, profile analysis.

5421. ANALYSIS OF CATEGORICAL DATA. (4 cr, §5162; prereq 3012 or 5021 or 5133 or #)

Varieties of categorical data, cross-classifications and contingency tables, tests for independence. Multidimensional tables and log-linear models, maximum-likelihood estimation, and tests of goodness of fit. Analysis of Markov chain data. Smoothing counts.

5601w. NONPARAMETRIC METHODS. (4 cr; prereq 5021 or 5122 or 5132 or #)

Necessary discrete and continuous probability distributions. Goodness of fit, sign tests, order statistics, rank tests for location and for scale, two-sample and k-sample comparisons, association. Methods and applications.

5890. SENIOR PAPER. (2 cr; prereq sr statistics major)

Satisfies senior project requirement for majors. Directed study. Paper on specialized area, a consulting project, or original computer program.

5900. TUTORIAL COURSE. (Cr ar; prereq #)

Study in areas not covered by regular offerings. Directed study.

5911. TOPICS IN STATISTICS. (3 cr [may be repeated for cr with Δ]; prereq 3091 or 5021, #)
Topics vary.

Studio Arts

See Arts, Studio.

Study Abroad

See Foreign Study.

Sumerian

See Classical and Near Eastern Studies.

Swahili

See Afro-American and African Studies.

Swedish

See Scandinavian Languages and Literature.

Institute of Technology

Courses appearing in the CLA Bulletin are approved for CLA credit. However, CLA students may take up to 28 credits of coursework offered by other colleges. The credits may be applied toward CLA degrees, and in some cases may be used to fulfill general education requirements. Consult your college office adviser for a list of courses from other colleges approved for general education requirements.

Descriptions of courses offered by the Institute of Technology can be found in the bulletin of that college. The basic physical sciences and mathematics departments, which are administratively housed in the Institute of Technology, also are part of the College of Liberal Arts; their courses listed in this bulletin may be applied toward CLA degrees.

Theatre Arts and Dance

Theatre Arts Staff—*Chair*, Barbara Reid, 208 Middlebrook Hall; *Director of Undergraduate Studies*, Lee Adey, 236 Middlebrook Hall; *Director of Graduate Studies*, Glen Gadberry, 217 Middlebrook Hall

Professors Emeriti: Ballet, Congdon, Fredricks, Graham, Josal, Moulton, Thompson, Whiting

Professors: Adey, Balk, Brockman, Nolte, Reid

Associate Professors: Barker, Cheng, Gadberry, Kanee, Montgomery, Nash, Norwood

Assistant Professors: Egan, Gwinup, Kobi-alka, Maddux

Lecturer: Neely

Theatre arts is the study of the theory and practice of dramatic performance. Productions of the University Theatre provide a laboratory for courses. All University students are invited to participate in productions of the University Theatre.

Dance Staff—*Dance Coordinator*, Maria Cheng, 108 Norris Hall

Associate Professors: Barker, Cheng, Lampe

Assistant Professor: Maddux

Lecturers: Desiderio, Mathis, Richard, Sealy, Shapiro, Stanchfield

The Dance Program is committed to a curriculum that balances and integrates the liberal arts with dance academics, performance courses, and creative work. Performance opportunities are available for all University students through student repertory and University Repertory Company (URepCo) productions.

General Education—Courses that may be of interest to theatre nonmajors are 1101, 1102, 1301, 1321, 1405, 1504, 1805, 3115, 3171, 3172, 3801, 5171, 5172, 5181, 5182, 5186. Courses that may be of interest to dance nonmajors are 1001, 1002, 1003, 1004, 1005, 1006, 1007, 1008, 1009, 1031, 1032, 1033, 1034, 1035,

1101, 3401, 3402, 3486, 3700, 5485, 5700.

Study Abroad—The department strongly encourages students to incorporate an overseas study experience into their undergraduate program. Appropriate credits from such study can easily be applied toward the theatre arts major or minor; among the study abroad opportunities is Literature and Theatre in London. Credits applied toward a dance major or minor (upon faculty review) may be received from on-site study of distinct dance traditions. Information on study abroad options and procedures is available in the theatre arts advising office. See also Foreign Study.

Theatre Arts

B.A. Major Sequence—Theatre Arts

Required Preparatory Courses—1101, 1321, 1504

Major Requirements—3171, 3172, 3173, 3513, 3515, 3701, 3711, 3801, 3901

12 cr in other 3xxx-5xxx courses chosen in consultation with adviser

The following order is recommended for completion of courses: 1101 and 1504 first; 1321 and 1xxx electives before 3xxx core courses; 3513 before 3515 and both of these plus 3801 before the requirement in stage direction; 3901 during senior year. 1326 is a prerequisite to advanced acting courses.

Courses in art history, dance, dramatic literature, humanities, music, psychology, and studio arts are recommended.

Minor Sequence—Theatre Arts

Required Preparatory Courses—1101, 1301 or 1321, 1504

Minor Requirements—2 out of 3 courses in Theatre History (3171, 3172, 3173), 3513, 3515, 3701

1101f, w.s. INTRODUCTION TO THE THEATRE. (4 cr) Kobi-alka, Nolte, Norwood
History and theory of plays and playwrights.

1102. DRAMA AND MEDIA. (4 cr) Neely
Study of dramatic form in contrasting media: theatre, film, and television. Lectures and film showings. Theatre attendance required.

Major Requirements and Course Descriptions

1301f,w,s. BEGINNING ACTING FOR NON-THEATRE MAJORS. (4 cr; prereq 1101) Staff

Background and techniques of the acting process as viewed and practiced in the theatre, in society, and in the student's own relationships.

1321f,w,s. BEGINNING ACTING. (4 cr; prereq 1101, 1504) Norwood, staff

Beginning techniques and exercises leading to performance, monologues and scenes.

1326f,w,s. BEGINNING MOVEMENT FOR ACTORS. (4 cr; prereq 1321) Staff

Fundamentals of body movement, relating to acting technique, leading to individual and group performances.

1405f,w,s. HONORS COURSE: INTRODUCTION TO THE THEATRE. (2 cr; prereq 1101, #)

Enrichment course for students who have completed 1101 with outstanding records. Laboratory.

1502f,w,s. MAKEUP FOR THE ACTOR. (2 cr; prereq 1504, clean-shaven face)

Theory and practice in stage makeup.

1504f,w,s,su. ELEMENTS OF TECHNICAL THEATRE. (4 cr; prereq 1101 or ¶1101)

The arts and crafts of the theatre: scenery, construction and painting, stage operation, theatre lighting, costuming. Laboratory.

1805. AMERICAN ETHNIC LITERATURE IN PERFORMANCE. (4 cr)

Individual and group exploration and performance of selected poems, stories, and plays by Afro-American, American Indian, and Chicano writers.

3115. INTRODUCTION TO PLAYWRITING. (4 cr, §EngW 3110; offered through Extension) Nolte, staff

Introduction to playwriting techniques.

3171, 3172, 3173. HISTORY OF THE THEATRE.

(4 cr per qtr; prereq 1101, theatre major) Kobialka
History of Western theatre and drama; theatrical practices, staging conventions and dramatic structure of plays. *3171*: Ancient Greece through Renaissance. *3172*: Neo-classicism through realism. *3173*: Naturalism to present.

3311f,w,s. BEGINNING VOICE PRODUCTION.

(4 cr; prereq 1321 or ¶1321)

Exercises to develop abdominal breathing, tonal placement, and clear articulation. Analysis and performance of prose, poetry, and drama.

3321-3322. INTERMEDIATE ACTING. (4 cr per qtr; prereq 1326, 3311, theatre major or written #) Reid, staff

Beginning acting, voice, and movement progressing to more advanced techniques and exercises in performance of scenes and monologues from modern drama.

3323. ADVANCED ACTING: PERIOD STYLES. (6 cr; prereq 3321-3322 or #)

Advanced research and performance of scenes from period plays and related dances.

3412f,w,s. HONORS COURSE: TUTORIAL SEMINAR IN THEATRE ARTS. (0-3 cr [limited to 3 cr for

cum laude, magna cum laude; up to 3 additional cr through X regis for *summa cum laude*]; prereq candidate for honors in theatre arts, Δ)

Independent reading and research in preparing honors thesis or creative project.

3513f,alt su. TECHNICAL THEATRE PRODUCTION I. (5 cr; prereq 1504) Brockman, Gwinup

Theory and practice of design and execution of stage scenery and properties. Laboratory.

3515 once yearly,alt su. TECHNICAL THEATRE PRODUCTION II. (5 cr; prereq 1504) Egan, Montgomery

Theory and practice in design and execution of stage lighting and costuming. Laboratory.

3701f,w,s,su. INTRODUCTION TO DIRECTING.

(4 cr; prereq 1101, 1301 or 1321, 1504, major or minor) Adey, Kanee

A creative approach to basic stage direction techniques, stressing elementary script analysis, rehearsal techniques, improvisation, blocking, and movement.

3711f,w,s. BEGINNING STAGE DIRECTION. (4 cr; prereq 1504, 3701, jr or sr) Adey, Kanee

Theory of direction; concept and analysis. Blocking and production of short scenes.

3801f,w,s. PERFORMING FICTION. (4 cr; prereq 1504 or 1805) Norwood, staff

Selected short stories. Solo and group readings.

3803f,w,s. PLATFORM PERFORMANCE. (4 cr; prereq management major)

Reading and analyzing selected poems, plays, and stories; interpreting literary insights through solo and group performance.

3901. THEATRE ARTS/DANCE SENIOR SEMINAR. (4 cr; prereq sr, theatre arts or dance major)

Seminar in contemporary perspectives on performing arts covering major 20th-century styles and forms such as dadaism, surrealism, futurism, expressionism, neo-romanticism, and performance art. Future directions in theatre and dance in the Twin Cities. Meets concurrently with Dnce 3901.

3950. TOPICS IN THEATRE. (1-5 cr per qtr [12 cr max])

Topics specified in *Class Schedule*.

3980f,w,s,su. DIRECTED INSTRUCTION. (1-3 cr per qtr [8 cr max]; prereq completion of course in which teaching will be done, Δ)

5100f,w,s,su. THEATRE PRACTICUM. (1-6 cr per qtr; prereq #, Δ)

Individual creative projects in production of a play as an actor, designer, director, Dramaturg, or playwright.

5110f,w,s,su. THEATRE PERFORMANCE. (1 cr per qtr [9 cr max]; prereq written permission after casting and/or assignment to a production; S-N only) Montgomery

Participation in rehearsals and performances of a major University Theatre production. Credit awarded the quarter performance takes place.

5115. ADVANCED PLAYWRITING I. (4 cr, §EngW 5204; prereq written #)

Advanced playwriting workshop for students with established competence.

5116. ADVANCED PLAYWRITING II. (4 cr, §EngW 5310; prereq 5115, written #) Nolte

Continued advanced playwriting techniques for students with established competence. Emphasizes production.

5130w. SHAKESPEARE. (4 cr; prereq 1101 or #) Norwood

A seminar on plays of Shakespeare from perspectives of staging for the theatre and conceiving for the media. Selected genres and/or topics will be offered, e.g., histories, tragedies, comedies, and romances.

5131, 5132, 5133. SHAKESPEARE. (4 cr; prereq 1101, offered once every three yrs) Norwood

Seminars on plays of Shakespeare from perspective of staging and conceiving for media. Video presentation accompanies study of each play. *5131*: The comedies and romances. *5132*: The histories. *5133*: The tragedies.

5171, 5172, 5173. HISTORY OF THEATRE. (4 cr per qtr) Gadberry

Theatre as a mirror of society. Aesthetics, philosophy, and techniques of theatre arts. *5171*: Origins to 1642. *5172*: Renaissance to 1875. *5173*: Theatre arts from 1875.

5181. CONTEMPORARY BLACK THEATRE:

1960-PRESENT. (4 cr, §Afro 5181)

Essays, plays, playwrights, and theatres that have contributed to contemporary black theatre, from beginning of Black Arts Movement to present.

5182. BLACKS IN AMERICAN THEATRE:

1820-1960s. (4 cr, §5182)

Historical survey of American Black theatrical tradition; essays, plays, playwrights, and theatres from early colonial references to Black Arts Movement.

5191. MYTH AND THE PERFORMANCE OF

MODERN DRAMA I. (4 cr; prereq 5173 or 5178 or #; offered alt yrs) Neely

Examines construction, reinforcement, or destruction of myth in selected theatre works.

5192. MYTH AND THE PERFORMANCE OF

MODERN DRAMA II. (4 cr; prereq 5191 during preceding qtr; offered alt yrs) Neely

Examines construction, reinforcement, or destruction of myth in selected theatre performances.

5313. INTERMEDIATE VOICE PRODUCTION

FOR THE THEATRE. (4 cr; prereq #, written permission) Nash

Analysis and performance of songs for music theatre.

5314-5315. STAGE COMBAT. (2 cr per qtr; prereq 1326 or grad, #)

History, techniques, and aesthetics of staging physical combat. *5314*: Unarmed combat. *5315*: Armed combat.

5321. PROBLEMS IN PROFESSIONAL ACTING.

(4 cr; prereq 3323 or grad)

Exploration by students and a professional actor of acting techniques necessary for professional careers.

5323. ACTING FOR THE CAMERA. (4 cr; prereq 3321-3322 or grad)

Laboratory course. Differences between stage acting and acting for camera. Scenes enacted and played back on videotape for class critique. Students operate cameras. Attendance mandatory.

5327. INTRODUCTION TO MIME AND MASK I.

(2 cr; prereq 3321 or grad)

Introduction to work in mime and mask.

5328. MIME AND MASK II. (2 cr; prereq 5327 or grad)

More advanced mime and mask training for actors.

5334f-5335w-5336s. ACTING FOR MUSIC THE-

ATRE. (4 cr per qtr; prereq #) Kanee

Philosophy and techniques of music and theatre applied to spoken and sung dramatic literature.

5510. DRAWING AND RENDERING FOR THE-

ATRE DESIGNERS. (2 cr per qtr; prereq 3513 or 3515 or grad, #) Brockman

Drawing and rendering skills for presentation of scenic and costume designs. Drawings in fall, renderings in spring.

5511. THEATRE DRAFTING AND GRAPHICS.

(4 cr; prereq 3513, 3515 or equiv or #) Brockman,

Gwinup, Montgomery

Practical study of drafting skills for theatre designer (scenery and lighting) and technical director. Interpretation of rendering, sketches, and models for realization on-stage.

5515. DESIGN COMPOSITION AND COLLABO-

RATION. (4 cr; prereq 3513 or equiv #)

In-depth study of classical composition of art and its application to stage design and directing. Emphasizes creative development of design composition through classical composition and organic collaborative process.

Major Requirements and Course Descriptions

5530. COSTUME DESIGN. (4 cr; prereq 3515 or #) Egan

Theory and design of costumes; special projects. Laboratory arranged.

5532. ADVANCED MAKEUP FOR THE STAGE.

(2 cr; prereq 1502 or equiv or grad)

Facial casting, prosthetics, and hair ventilating.

5540. LIGHTING DESIGN. (4 cr; prereq 3515, 3701, 5511 or #) Montgomery

Theory of stage lighting design. Development of lighting plot and paperwork. Laboratory arranged.

5550. THEATRE SOUND DESIGN. (2 cr; prereq 1504, 5564 or #)

Theory and approaches to analysis and creation of auditory environment for theatrical productions. Listening, psychoacoustics, milking techniques, script analysis, and projects. Laboratory arranged.

5560. THEATRE CRAFTS PRACTICUM. (1-4 cr per qtr; 6 cr max for undergrads; prereq 3513 or 3515, #)

Individual creative projects that further practical skills and knowledge in specialized craft areas of theatre.

5561. STAGE CRAFT. (4 cr; prereq 3513, 5511 or #)

In-depth study and practical application of scenic materials, tools, and construction processes used in theatre today. Laboratory arranged.

5562. SCENE PAINTING TECHNIQUES. (4 cr; prereq 3513 or #) Brockman

Practical study of materials, layout, and painting techniques used in theatre. Emphasizes painting styles and texturing techniques.

5563. COSTUME/PROPERTIES CRAFTS. (4 cr;

prereq 3513 or grad) Egan, Gwinup, guest instructors
Accessories, fabric enhancement techniques, materials, construction techniques, tools, and processes used in costume and properties crafts.

5564. LIGHTING AND SOUND CRAFTS AND

TECHNIQUES. (4 cr; prereq 3515 or equiv) Montgomery, Gwinup, guest instructors

Lighting and sound technician's skills and crafts: equipment, techniques, control operation, wiring, and maintenance from practical standpoint in lighting and sound technology. Laboratory arranged.

5711 twice yearly. STAGE DIRECTION/AVANT-

GARDE DRAMA. (4 cr per qtr; prereq grad or #) Adey, Kanee

Theory, technique, and production of 20th century non-realistic theatre, direction of two one-act or extended scenes from the genre.

5712. ADVANCED STAGE DIRECTION. (4 cr; prereq 3711 or 5711) Adey

Examination of dramatic forms. Theory of rehearsal; production problems and direction of two one-act plays.

5716. STAGE MANAGEMENT FOR THE THEATRE. (4 cr; prereq 3701 or ¶3701 or grad) Montgomery

Stage management as a specialized area. Theories and techniques of rehearsal and performance, organization and management in educational, community, and professional theatres.

5718. THEATRE MANAGEMENT AND PROMOTION. (4 cr; prereq 1504) Neely

Introduction to the theory, problems, and solutions of administrative planning, budgeting, advertising, and publicity for the not-for-profit theatre.

5720f,w,s. PLAYS IN PRODUCTION AND PER-

FORMANCE. (2-4 cr per qtr [6 cr max for undergrads]; prereq 5712, written permission) Adey, Kanee
Work on campus or with a community, high school, touring, or professional theatre group for experience in stage direction.

5728. THEATRE MANAGEMENT PROBLEMS: AUDIENCE AND FINANCIAL DEVELOPMENT.

(2 cr; prereq 5718) Neely

Practical analysis of audience and financial development problems in U.S. theatre. Concentration on various solutions.

5734-5735-5736. DIRECTING THE SINGER ACTOR. (4 cr per qtr; prereq 5712, ¶5334-5335-5336, #) Kanee

Directing and coaching the singer actor in use of language and in music and theatre performance.

5760f,w,s. ADVANCED STAGE MANAGEMENT.

(1-3 cr per qtr [6 cr max for undergrads]; prereq 5716 or ¶5716, written permission) Montgomery

Practical experience in stage management for University Theatre productions; rehearsal and performance.

5823f,w,s. INTERPRETING SHAKESPEARE. (4 cr; prereq sr or grad or #)

Solo and group analysis and performance of speeches and scenes from Shakespeare.

5920-5950. TOPICS IN THEATRE. (1-5 cr per qtr [12 cr max])

Topics specified in *Class Schedule*.

5970f,w,s,su. DIRECTED STUDIES. (1-6 cr per qtr; prereq 9 cr theatre, #, Δ)

Guided individual reading or study.

Dance

B.A. Major Sequence—Dance

Required Preparatory Courses—1010f, 1020w, 1030s

Major Requirements—1040f, 1050w, 1060s, 1070f, 1080w, 1090s, 1101, 1111-3333, 3010f, 3020w, 3030s, 3311f, 3312w, 3313s, 3401, 3402, 3511, 3901,

6 cr to be selected from 3700 or 5700, Th 1504

4 cr in 1110 or 3330

6 cr in performance electives

6 cr in academic electives including specified courses in theatre, music, media arts, and visual arts.

B.F.A. Major Sequence—Dance

Required Preparatory Courses—1010, 1020, 1030, 1040, 1050, 1060, 1070, 1080, 1090

Major Requirements—1101, 1111 or 3333, 3010, 3020, 3030, 3040, 3050, 3060, 3070, 3080, 3090, 3311, 3312, 3313, 3401, 3402, 3511, 3666, 3901, 5010, 5020, 5030, 5312, 5313, 5314, 5616, Th 1504

7 cr from 1110 or 3330

18 cr to be selected from 3700 or 5700

4 cr in performance electives

8 cr in academic electives including specified courses in theatre, music, media arts, and visual arts

Minor Sequence—Dance

Required Preparatory Courses—1101; 6 additional cr to be chosen from ballet, modern, or jazz techniques

Minor Requirements—3401, 3402, 3311, 3511; 11 additional cr to be chosen at or above the 3xxx level

1001. FUNDAMENTALS OF MODERN DANCE I. (1 cr)
Fundamentals of modern dance technique.

1002. FUNDAMENTALS OF MODERN DANCE II. (1 cr)
Fundamentals of modern dance techniques, level two. Exploring rhythms and dynamics underlying movement.

1003. FUNDAMENTALS OF MODERN DANCE III. (1 cr)
Fundamentals of modern dance techniques, level three. Exploring movement qualities.

1004. FUNDAMENTALS OF BALLET I. (1 cr)
Fundamentals of classical ballet techniques, including barre and center work.

1005. FUNDAMENTALS OF BALLET II. (1 cr)
Fundamentals of classical ballet including barre, center work, and combinations, level two.

1006. FUNDAMENTALS OF BALLET III. (1 cr)
Fundamentals of classical ballet, including barre, center work, combinations, adagio and allegro movements, level three.

1010. BEGINNING MODERN TECHNIQUE I. (2 cr; prereq Δ, audition)
Basic technique of modern dance. Class meets four days per week.

1020. BEGINNING MODERN TECHNIQUE II. (2 cr; prereq 1010)
For description, see 1010.

1030. BEGINNING MODERN TECHNIQUE III. (2 cr; prereq 1020)
For description, see 1010.

1031. BALLROOM DANCE I. (1 cr)
Elementary steps and variations of the foxtrot, lindy, waltz, tango, cha-cha, rumba, and samba.

1032. BALLROOM DANCE II. (1 cr)
Second level of the foxtrot, lindy, waltz, tango, cha-cha, rumba, and samba; emphasis on style.

1033. BALLROOM DANCE III. (1 cr)
English quickstep, waltz, bolero, mambo; advanced routines for tango, cha-cha.

1034. INTERNATIONAL FOLK DANCE I. (1 cr)
Maddux
International folk dances.

1035. INTERNATIONAL FOLK DANCE II. (1 cr; prereq 1034 or equiv) Maddux
Intermediate international folk dance.

1040. BEGINNING BALLET TECHNIQUE I. (1 cr; prereq Δ, audition)
Develop an awareness of classical ballet as an art form; line, design, balance, body positions, and footwork in classical expression.

1050. BEGINNING BALLET TECHNIQUE II. (1 cr; prereq 1040)
Basic ballet technique. Class meets two days a week.

1060. BEGINNING BALLET TECHNIQUE III. (1 cr; prereq 1050)
For description, see 1050.

1070. BEGINNING JAZZ I. (1 cr; prereq 1003 or 1006, audition or #) Sealy
Basic jazz technique and stylistic range of jazz dance and its origins.

1077. BEGINNING TAP I. (1 cr; offered through Extension) Sealy
The basics of tap; working on fundamental syncopation and various rhythms.

1078. BEGINNING TAP II. (1 cr, prereq 1077; offered through Extension) Sealy
The basics of tap; working on improving syncopation and rhythm.

Major Requirements and Course Descriptions

1079. BEGINNING TAP III. (1 cr; prereq 1078; offered through Extension) Sealy
Working on advanced syncopation and more complex rhythms.

1080. BEGINNING JAZZ II. (1 cr; prereq 1070 or equiv) Sealy
Improvement on basic jazz technique and stylistic range of jazz dance.

1090. BEGINNING JAZZ III. (1 cr; prereq 1080 or equiv) Sealy
Refinement of basic jazz technique and stylistic range of jazz dance and its origins.

1101. INTRODUCTION TO DANCE. (4 cr)
Survey of the history and theory of dance in all its forms and all its aspects.

1110. TOPICS IN DANCE THEORY. (1-2 cr)
Topics specified in *Class Schedule*.

1111. THE ARTICULATE BODY: KINESIOLOGY AND BIODYNAMICS OF DANCE. (4 cr; meets with 3333; prereq dance major or minor, Δ)
Lectures and movement sessions in biodynamic considerations for optimal dance performance and metabolic demands of dance. Meets concurrently with 3333.

3010. INTERMEDIATE MODERN TECHNIQUE I. (2 cr; prereq 1030 or #)
Intermediate modern dance technique. Class meets four days per week.

3020. INTERMEDIATE MODERN TECHNIQUE II. (2 cr; prereq 3010 or #)
For description, see 3010.

3030. INTERMEDIATE MODERN TECHNIQUE III. (2 cr; prereq 3020 or #)
For description, see 3010.

3040. INTERMEDIATE BALLET TECHNIQUE I. (2 cr [6 cr max]; prereq 1060; offered through Extension)
Placement, alignment, increasing vocabulary, and developing strength.

3050. INTERMEDIATE BALLET TECHNIQUE II. (2 cr [6 cr max]; prereq 3040 or #; offered through Extension)
For description, see 3040.

3060. INTERMEDIATE BALLET TECHNIQUE III. (2 cr [6 cr max]; prereq 3050 or #; offered through Extension)
For description, see 3040.

3070. INTERMEDIATE JAZZ I. (2 cr [6 cr max]; prereq 1090 or equiv) Sealy
Various styles of jazz dance at intermediate level.

3077. INTERMEDIATE TAP I. (1 cr; prereq 1079 or #)
Basic skills of tap dance; syncopation, clarity of movement, and tone and texture of sound.

3078. INTERMEDIATE TAP II. (1 cr; prereq 3077 or #)
Expanding basic skills of tap dance; more intricate syncopation, clarity of movement, and tone and texture of sound.

3079. INTERMEDIATE TAP III. (1 cr; prereq 3078 or #)
Technical skills in tap dance; advanced syncopation, clarity of movement, and enhancement of tone and texture of sound.

3080. INTERMEDIATE JAZZ II. (2 cr [6 cr max]; prereq 3070 or equiv) Sealy
Intermediate level jazz technique and stylistic range of jazz dance and its origins.

3090. INTERMEDIATE JAZZ III. (2 cr [6 cr max]; prereq 3080 or equiv) Sealy
Refinement of intermediate level jazz technique and stylistic range of jazz dance.

3311. COMPOSITION I. (2 cr; prereq 1003 or equiv)
Emphasis on exploration and spontaneous invention of movement themes and ideas through greater awareness of space, movement, and community environment. Lab.

3312. DANCE COMPOSITION II. (3 cr; prereq 3311 or equiv)
Basic principles of composition, with an emphasis on imagination, culminating in the creation of a solo. Laboratory.

3313. DANCE COMPOSITION III. (3 cr; prereq 3312 or equiv)
Introduction to the use of form in choreography, culminating in a duet or trio. Laboratory.

3330. TOPICS IN DANCE THEORY. (1-2 cr; prereq 1030)
Topics specified in *Class Schedule*.

3333. THE ARTICULATE BODY: KINESIOLOGY AND BIODYNAMICS OF DANCE. (4 cr; meets with 1111; prereq dance major or minor, Δ)
Lectures and movement sessions in biodynamic considerations for optimal dance performance and metabolic demands of dance. Meets concurrently with 1111.

3401. DANCE HISTORY I. (4 cr; prereq 1101)
Human expression from its mystical and ritualistic functions in dance to a development toward dance as a theatre art beginning with primitive society to the Renaissance.

3402. DANCE HISTORY II. (4 cr; prereq 1101)
Major theatre dance works; dancers and choreographers from the Renaissance to the present.

3486. ETHNIC DANCE TRADITION IN AMERICAN SOCIETY. (4 cr) Maddux
Survey of traditional dances as preserved and transformed by Asian Americans, African Americans, Native Americans, and Latinos. Emphasis on interpretation of the roles of the dance in these sub-cultures.

3511. MUSIC FOR DANCE. (4 cr; prereq 1003, 1006 or equiv)

Elements of music theory, form, analysis, and history necessary for the potential dancer, choreographer, and musician to better understand each art.

3551. CELEBRATION AND RITUAL: ETHNIC ELEMENTS IN ISRAELI DANCE. (4 cr; prereq 1101)

Mosaic of Israeli culture expressed through dance of various religious, ethnic, and social communities.

3666. DANCE PHILOSOPHY AND ESTHETICS. (4 cr; prereq 3401, 3402)

Major developments in Western philosophic thought on dance and dance theory from its beginnings to present.

3700. DANCE REPERTORY THEATRE AND RECONSTRUCTION. (3 cr; prereq must be enrolled in a technique class, audition)

Construction of a dance theatre work under the direction of a guest choreographer. Credit awarded the quarter performance takes place.

3712. DANCE NOTATION. (4 cr)

Systems for recording movement; motif writing/description and lab.

3901. THEATRE ARTS/DANCE SENIOR SEMINAR. (4 cr; meets with Th 3901; prereq sr standing in theatre arts or dance)

Contemporary perspectives on performing arts covering major 20th-century styles and forms such as Dadaism, surrealism, futurism, Expressionism, Neo-Romanticism, and performance art. Future directions in theatre and dance as manifested in Twin Cities productions. Meets concurrently with Th 3901.

5010. ADVANCED MODERN TECHNIQUE I. (3 cr; prereq 3030 or #)

Advanced modern dance technique. Class meets five days per week.

5020. ADVANCED MODERN TECHNIQUE II. (3 cr; prereq 5010 or #)

For description, see 5010.

5030. ADVANCED MODERN TECHNIQUE III. (3 cr; prereq 5020 or #)

Refinement of advanced modern dance technique.

5040. ADVANCED BALLET TECHNIQUE I. (1 cr; prereq 3060 or #)

Long continuities or phrases of movement that incorporate multiple turns, beaten jumps, pointe work, and grand allegro.

5050. ADVANCED BALLET TECHNIQUE II. (1 cr; prereq 5040 or #)

For description, see 5040.

5060. ADVANCED BALLET TECHNIQUE III. (1 cr; prereq 5050 or #)

For description, see 5040.

5070. ADVANCED JAZZ I. (1 cr [3 cr max])

Perfect the various jazz dance styles with concentration on performance quality.

5080. ADVANCED JAZZ II. (1 cr [3 cr max])

For description, see 5070.

5090. ADVANCED JAZZ III. (1 cr [3 cr max])

For description, see 5070.

5100. DANCE PRACTICUM. (1-6 cr; #, Δ)

Arranged individual creative projects in dance.

5312. DANCE COMPOSITION IV. (3 cr; prereq 3313 or equiv)

The use of form in small ensemble choreography. Lab.

5313. DANCE COMPOSITION V. (3 cr; prereq 5312 or equiv)

Continued study and development of the craft for large ensemble choreography. Lab.

5314. DANCE COMPOSITION VI. (3 cr; prereq 5313 or #)

Advanced choreography including elements of props, sets, lights, costumes, and sounds. Lab.

5487. WORLD DANCE STUDIES. (4 cr) Maddux

Dance as art, ritual, social activity, and entertainment in selected cultures of Asia, Africa, the Americas, and Eastern Europe.

5605. DANCE FOR CHILDREN. (4 cr; prereq 1001, 1004, #)

Movement vocabulary, movement exploration, form building, and composition studies for children culminating in a children's dance performance.

5616. TEACHING DANCE. (4 cr)

Study and experimentation of methods, principles, and techniques of teaching dance.

5700. WORKSHOP: DANCE PERFORMANCE.

(3 cr; must be enrolled in a technique class)

Technique, improvisation, choreography, music, design, and technical production as they relate to dance performance.

5910. TOPICS IN DANCE: CHOREOGRAPHIC WORKSHOP. (3 cr; prereq #)

Performance of dance theatre work constructed by faculty and guest choreographer.

Turkish

See Institute of Languages and Literatures.

Urban Studies (UrBS)

Staff—Director, Judith Martin, 348 Social Sciences Building

Adjunct Faculty—Professors: J. Adams (Geography and Humphrey Institute), Ber-

Major Requirements and Course Descriptions

man (History), Clemence (Architecture), Galaskiewicz (Sociology), Scott (Political Science), Sheppard (Geography), Wattenberg (Social Work)

Associate Professors: Archer (Humanities), Brewer (Afro-American Studies), Leitner (Geography), Miller (Geography)

Assistant Professor: Goetz (Housing)

This cross-disciplinary major involves urban studies coursework, fieldwork experiences, and introductory work in a number of disciplines that offer useful perspectives on contemporary urban and postindustrial society. Two degree options are offered. They focus on the conceptual and analytical frameworks and specialized skills necessary to enter professions focused on urban change or development in public agencies or private business or to undertake graduate study in urban planning, law, social welfare, public affairs, or the social and environmental sciences. The urban studies advising office offers students help in choosing a degree plan and provides current information about courses, research, and fieldwork opportunities.

Overseas and U.S. Off-Campus Study—

Students are encouraged to incorporate field study into the major or minor. Among the relevant options are HECUA-sponsored urban studies programs in Colombia, Norway, and the Twin Cities. In addition, many opportunities exist for internships and independent field research projects. See also Foreign Study.

B.A. and B.S. Degree Programs

You may choose one of two urban studies degree options, depending on your career plans. Both the B.A. and the B.S. require coursework focusing on urban form and society, with additional credits from areas such as cultural analysis and political economy and infrastructure. Both degrees also require an internship and a senior paper. The B.S. requires substantive quantitative skills coursework. Depending on the degree track chosen, the required number of major program credits ranges from 56 to 68.

Although you will develop an individual major program, all students will complete certain courses within the program: an introductory course, two urban studies colloquia, and two workshops. The *Urban Studies Program Booklet*, available from the department, contains a listing of required and recommended courses for each of the degree options as well as urban-related course offerings in other University departments that can be used to fulfill various urban studies requirements.

Minor Sequence

Minor Requirements—19-21 cr, including 3104, 3500, 3101 or 3102 or 3103, electives

3101f, 3102w, 3103s. URBAN STUDIES COLLOQUIA. (2 cr per qtr; prereq Δ) Staff
Introduction to urban problems and problem-solving techniques.

3104. INTRODUCTION TO URBAN STUDIES. (4 cr; prereq #; A-F only) Martin
Introduction to the field for urban studies sophomores and those considering an urban studies major. Lectures and discussions to integrate the diverse aspects of urban studies.

3301. AMERICAN CITIES: SETTINGS FOR CULTURAL PLURALISM. (4 cr; prereq #) Staff
Exploration of the potential that U.S. cities hold for nurturing cultural pluralism. Explores the problems, conflicts, and successes of pluralistic efforts in our cities.

3500f,w,s. WORKSHOPS. (4 cr per qtr; prereq jr or sr, #) Staff
Project-focused workshops, usually with substantial field experience components.

3900f,w,s. INTERNSHIP. (1-6 cr per qtr [12 cr max]; prereq jr or sr, Δ) Staff
Internships arranged for any quarter or summer term. A weekly seminar to integrate the internship experience with the academic program should be taken during the internship.

3970. DIRECTED STUDIES. (2-6 cr; prereq Δ)
Guided individual reading or study.

Urdu

See Institute of Languages and Literatures.

Women's Studies (WoSt)

Staff—*Chair*, Constance Sullivan, 483 Ford Hall

Professors: Faunce (Women's Studies, Psychology), McNaron (English, Women's Studies)

Associate Professors: Brewer (Afro-American and African Studies, Women's Studies), Geiger (Women's Studies), Hoy (English, Women's Studies), Kaminsky (Women's Studies), Scheman (Philosophy, Women's Studies), Spector (Anthropology, Women's Studies), Zita (Women's Studies)

Assistant Professors: Reyes (Women's Studies)

Adjunct Faculty

Professors: S. Evans (History), Fellows (Law School), Garner (English), Joeres (German), Junghare (South Asian and Middle Eastern Studies), Laslett (Sociology), Loeffler (University Counseling Services), E. May (American Studies), Maynes (History), Nelson (Humphrey Institute), Noakes (French and Italian), Quam (Social Work), Sprengnether (English), Wahlstrom (Rhetoric)

Associate Professors: Albrecht (General College), Bridwell-Bowles (English), Chow (Comparative Literature), Disch (Political Science), Dietz (Political Science), Jones (Social Work), Kane (Kinesiology), Messer-Davidow (English), Pomata (History), Prell (American Studies), Rabinowitz (English), Robinson (Architecture and Landscape Architecture), Sheldon (Linguistics), Sivert (French and Italian), Sullivan (Spanish and Portuguese), Waltner (History), Yates (American Studies)

Assistant Professors: Damon (English), Monnet (East Asian Studies), O'Connell (Spanish and Portuguese)

Instructors: Fraser (Humphrey Institute), Lindoo (Continuing Education for Women), Truax (Affirmative Action and Equal Opportunity)

Lecturers: Fletcher, Katz, Knutson, Marquit

The women's studies department addresses the University community's need to develop feminist perspectives through multidisciplinary and multicultural approaches to the study of women.

Courses continue to be added to the program. The *Class Schedule* or the women's studies office can provide up-to-date information about new courses and more specific information about current courses.

Honors Program—Qualified majors are encouraged to participate in the department's honors program. The program is flexible in meeting student needs and includes a major research, creative, or pedagogical project.

Overseas and U.S. Off-Campus Study—Students are encouraged to incorporate field or overseas classroom study into their program. Study in another country can enhance comparative understanding of women's issues. For information, consult a department adviser; see also Foreign Study.

B.A. Major Sequences

Required Preparatory Courses—1001, 1002 or 1003

Major Requirements—Sequence A: 48 cr in adviser-approved courses, 24 of them in WoSt course, including 8 cr in 3901 and 3902 (or 3960 in conjunction with senior project)

Sequence B: 48 cr in adviser-approved courses, including 8 cr in 3901 and 3902 (or 3960 in conjunction with senior project)

Majors are required to take at least one course that focuses on American minority women.

Majors may take a maximum of 12 cr in topics courses (3100, 5100, 3200, 5200, 3300, 5300, 3400, 5400, 3500, 5500, 3600, 5600).

Prospective majors should consult the *Women's Studies Handbook*. The handbook and a list of courses in other departments useful for major programs may be obtained from the Women's Studies office.

Major Requirements and Course Descriptions

Minor Sequence

Required Preparatory Courses—1001 or 1002 or 1003

Minor Requirements—Minimum of 20 3xxx-5xxx cr

A maximum of 8 cr in courses offered by other departments may be taken.

Course selections must be approved by a women's studies adviser.

Introductions to Women's Studies

1001, 1002. INTRODUCTION TO WOMEN'S STUDIES. (4 cr per qtr)

Women's studies as a discipline; feminist approaches to the current and rapidly changing conditions of women.

1003. WOMEN IN WORLD CULTURES. (4 cr)

The lives of women in non-Western societies, including their economic, political, and social contributions, familial roles, and status in society.

Feminist Thought, Theory, and Methods

3100. TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])

Topics specified in *Class Schedule*.

3102. FEMINIST THOUGHT AND THEORY. (4 cr)

Representative feminist theories and their relations to political action.

3103. FEMINIST APPROACHES TO HISTORY. (4 cr)

A comparative look at issues and problems in the study of women's history. Theoretical approaches, documents, and sources (written, oral, statistical) for understanding the female experience.

3104. FEMINIST EXPOSITORY WRITING. (4 cr, §Comp 3051; prereq completion of writing practice requirement, jr)

Stages of composing process; similarities and differences between feminist and traditional expository language and structure; improves skills for analytical and critical thinkers.

5100. TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])

Topics specified in *Class Schedule*.

5101. HISTORY OF WESTERN FEMINISM. (4 cr; prereq 1001, 1002)

Feminist thought and movements; feminist politics since 1790, especially in the United States and Great Britain; other international references.

5102. CURRENT FEMINIST ISSUES. (4 cr; prereq 1001, 1002 or grad or #)

Current scholarship dealing with new feminist ideas and issues.

5103. FEMINIST PEDAGOGY. (4 cr; prereq 8 cr women's studies or #)

Theory and practice of feminist teaching and learning as a system of inquiry. Emphasizes challenges raised by the diversity of women's experiences and perspectives.

5106. THE CULTURAL CONSTRUCTION OF SEX, GENDER, AND SEXUALITY. (4 cr; prereq undergrad, 12 cr women's studies or CAFS student or #)

Investigation of Euro-American concepts of sex, gender, and sexuality in representative texts and images from the 17th century to the present. Critical and source materials from literary and cultural studies, history, biology, anthropology, psychology, and sociology.

5107. FEMINIST CRITICISM OF CONCEPTS OF THE SELF. (4 cr; prereq 12 cr women's studies or substantial work in philosophy, religious studies or social sciences or psychology or #)

Traditional views and feminist alternatives to them concerning the self and related notions, such as human nature, individualism, and transcendence, as expressed in philosophy, religion, morality, politics, art, and psychology.

Women's Biology, Psychology, and Sexuality

3200. TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])

Topics specified in *Class Schedule*.

3202. BIOLOGY OF WOMEN. (4 cr; prereq Biol 1009 or Phsl 1001 or #)

Physiology, anatomy, and endocrine aspects of women's life cycles.

3203. BIOLOGY, RACE, AND GENDER. (4 cr; prereq 3202 or #)

Critical study of biological methods and theories used to explain and justify the social relations of race and gender.

3204. SEXUALITY AND SELF-IMAGE. (4 cr; prereq 1001, 1002, 1003 or #)

Social attitudes toward sexuality and how they influence our sense of self. Focus on art, pornography, sexual violence, psychosexual development, sexual identity, and political economy.

3205. WOMEN: A SENSE OF IDENTITY. (4 cr, §5205; offered through Extension)

Sex roles (social expectations, personal values, and personal behaviors). Applications of success analysis, strength identification, communication training, goal setting, and behavior rehearsal to affirm and develop the potential of women.

3206. WOMEN AND MADNESS IN HISTORY AND LITERATURE. (4 cr, §5206; prereq jr)

Forum for discussion of prescriptive application of label of "madness" to women since the 19th century. Literature, case studies, and critical and theoretical texts.

5200. TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])

Topics specified in *Class Schedule*.

5201. THE OLDER WOMAN: A FEMINIST PERSPECTIVE. (4 cr; prereq Soc 3937, 12 cr women's studies or substantial work in social sciences or psychology or #)

Changing roles of older women in our society and problems unique to them, including societal, health, economic, familial, emotional, sexual, and political concerns.

5202. FEMINIST THERAPIES. (4 cr)

Sexism in theoretical views of women and therapy; emerging views of alternative therapeutic approaches for women. Resources include feminist behavioral/social sciences research and literature; biographies, essays, and cases regarding women's lives; community resource persons.

5203. WOMEN, FEMINISM, AND POWER. (4 cr; prereq 12 cr women's studies or #; offered through Extension)

Exploration and development of feminist conceptualizations of power, including personal power, empowerment, spirituality, networking, civil disobedience, holism, and utopias.

5205. WOMEN: A SENSE OF IDENTITY. (4 cr, §3205; offered through Extension)
For description, see 3205.

5206. WOMEN AND MADNESS IN HISTORY AND LITERATURE. (4 cr, §3206)

Forum for discussion of prescriptive application of label of "madness" to women since the 19th century. Literature, case studies, and critical and theoretical texts.

Women in Literature and the Arts

3300. TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])

Topics specified in *Class Schedule*.

3303. WOMEN AND LITERATURE. (4 cr; prereq introductory work in literature)

Women writers and critics of literature about women. Usually limited to Western literature.

3304. WOMEN AND THE ARTS. (4 cr; prereq introductory work in music or art or drama or dance or film or other arts; offered through Extension)

Works of art by or about women. Focus may be on one or more of several forms of artistic expression.

3305. WOMEN AND LANGUAGE. (4 cr)

Women's use of language, sexism in language, contrast of usage and patterns of verbal and nonverbal language by women and men, feminist critiques of language, and evaluations of proposals for language reforms or radical linguistic change.

3306. U.S. MINORITY WOMEN WRITERS. (4 cr; prereq 8 cr women's studies or 4 cr women's studies and 4 cr literature, American studies, Chicano studies, Afro-American studies, or American Indian studies)

Analysis of poetry, fiction, and drama written by minority women in the United States.

3307. MODERN FEMINIST NOVEL. (4 cr; prereq English composition or equiv)

Analysis of fiction written by women that addresses questions of women's identity and the diversity of women's experience.

3308. WOMEN WRITERS OF AFRICA AND LATIN AMERICA. (4 cr, §5308; prereq 8 cr women's studies and/or Latin American or African studies or #; offered through Extension)

Literature written by 20th-century African and Latin American women.

5300. TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])

Topics specified in *Class Schedule*.

5301. WOMEN'S AUTOBIOGRAPHICAL NARRATIVES. (4 cr; prereq 12 cr women's studies or literature or #)

Women's autobiographical narratives from various theoretical, cultural, stylistic, and feminist perspectives.

Texts include autobiographical essays, letters, diaries, journals, formal autobiographies, and life stories.

5304. WORKING CLASS WOMEN'S LIVES. (4 cr; prereq 12 cr women's studies or English or #)

Written work reflecting class background. Novels, poems, essays, short stories by women of various racial and ethnic identities.

5305. WOMEN AND REPRESENTATION IN EUROPE. (4 cr; prereq 12 cr literature or feminist theory or #)

Ways in which women and gender are represented in various cultural discourses, including fiction, drama, poetry, painting, music, medicine, and science in Europe.

Comparative Study of Women

3400. TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])

Topics specified in *Class Schedule*.

3403. JEWISH WOMEN IN THE UNITED STATES. (4 cr)

Analysis of the cultural, social, economic, and religious conditions of European Jewry and American society in the 19th and 20th centuries that have structured the lives of American Jewish women; documentation of their perspectives on that process.

3404. LESBIAN CULTURES. (4 cr; prereq 8 cr women's studies; offered through Extension)

Theoretical and historical readings combined with literature, music, and art; emphasis placed on cultural contexts within which lesbian cultures exist.

Major Requirements and Course Descriptions

3405. LATIN AMERICAN WOMEN'S LIVES. (4 cr; prereq 1001, 1002 or 1003 or LA 3131 or #)
Interdisciplinary study of women in a variety of Latin American countries; focuses on issues of race, sexuality, education, class, and ethnicity.

3406. WOMEN, RACE, AND CLASS IN THE U.S. (4 cr; prereq 1001, 1002 or 1003 or major or #)
Impact of racism on women in different communities of color; Jewish American and white ethnic communities.

5400. TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])
Topics specified in *Class Schedule*.

5401. WOMEN, COLONIALISM, AND UNDERDEVELOPMENT. (4 cr)
Impact of colonial domination and economic underdevelopment on Third World women's lives; strategies employed by women to resist, survive, and overcome oppressive conditions.

5402. WOMEN IN CONTEMPORARY AMERICAN RELIGION. (4 cr; prereq 1001, 1002, 1003 or grad or #)
Present-day American women's spiritual consciousness and participation in religious institutions and religious movements. New forms of women's spiritual/religious knowledge and beliefs, quests, and expressions of them; their history and sources.

Women, Public Policy, and the Law

3500. TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])
Topics specified in *Class Schedule*.

5500. TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])
Topics specified in *Class Schedule*.

5501. WOMEN AND THE LAW. (4 cr)
The legal system as it relates to women. Areas of criminal law, welfare law, employment law, corporate law, alternative delivery systems for legal service, and legal education.

5502. WOMEN AND PUBLIC POLICY. (4 cr; prereq 1001, 1002, 1003 or #)
A survey of public policy issues of special concern to women in the United States.

Women and Work

3600. TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])
Topics specified in *Class Schedule*.

3602. WOMEN AND WORK. (4 cr per qtr [12 cr max])
The work women do studied in social, political, familial, and economic contexts. Topics may include women and economic structures, work and family, working-class women, women in the professions, women and development in the Third World. Topics specified in *Class Schedule*.

5600. TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])
Topics specified in *Class Schedule*.

5601. GENDER AND CLASS. (4 cr; prereq 1001, 1002 or 1003, 12 cr women's studies)
Interactions between gender roles and social class in a historical and comparative perspective; course topics introduce concepts and methods of gender and class analysis, women's work and economic systems, domestic work, social reproduction, feminism, and socialism.

Senior Seminars (required for Women's Studies majors)

3901. SENIOR SEMINAR. (4 cr per qtr; prereq jr or sr, majors only, Δ)
Advanced theory course with emphasis on how to read, critique, and apply theory.

3902. SENIOR SEMINAR. (4 cr per qtr; prereq 3901, jr or sr, majors only, Δ)
Writing and research seminar for senior research projects. (WoSt 3960 with prereq 3901 may be substituted for WoSt 3902 if the 3960 internship relates to senior project work.)

Directed Study, Research, and Internship Courses

3960. FIELD LEARNING IN WOMEN'S STUDIES. (4 cr per qtr [8 cr max]; prereq 1001, 1002 or 1003, one 3xxx WoSt course, Δ)
A seminar that includes internship placement with agencies and organizations that serve women or deal with issues of concern to women.

3970. DIRECTED STUDIES. (1-15 cr per qtr; prereq #, Δ)
Individualized reading or study with faculty supervisor.

3980. DIRECTED INSTRUCTION. (1-5 cr per qtr; prereq #, Δ)
Undergraduates serve as teaching assistants.

5970. DIRECTED STUDIES. (1-5 cr per qtr [12 cr max]; prereq #, Δ)
For description, see 3970.

Zoology

Courses in zoology may be found in the listings of the Department of Ecology, Evolution, and Behavior and the Department of Genetics and Cell Biology.

CLA Preparation for Degree Work in Other Colleges



CLA Preparation for Degree Work in Other Colleges

Undergraduate study in the College of Liberal Arts or a comparable institution is necessary for admission to many baccalaureate or professional degree programs, at Minnesota or elsewhere, and to graduate programs without exception. The requirements commonly include English composition and minimum GPAs (usually C for undergraduate programs, B or higher for graduate programs). Other requirements vary; consultation with appropriate offices and examination of academic bulletins concerning such questions—for example, the acceptability of S-N grades for graduate admissions—is always advisable.

Admission and achievement policies of University of Minnesota professional and advanced programs that involve CLA preparatory study are described briefly in the following pages. Bulletins of most University colleges and programs may be obtained at the Williamson Hall Information Center, or by calling 612/625-3030.

College of Architecture and Landscape Architecture

For 1992-93, the College of Architecture and Landscape Architecture (CALA) is an upper division college offering two pre-professional degrees in architecture (the B.A. with a major in architecture through CLA, and the bachelor of environmental design, or B.E.D., through CALA), and two professional degrees in architecture (the bachelor of architecture, or B.Arch., through CALA, and the master of architecture, or M.Arch., through the Graduate School). Information about the B.E.D. and B.Arch. programs is available from the College of Architecture and Landscape Architecture, 110 Architecture Building, University of Minnesota, 89 Church Street S.E., Minneapolis, MN 55455. Information about the M.Arch. program is available in the *Graduate School Bulletin* or from CALA.

CALA also will offer in 1992-93 three degrees in landscape architecture: the pre-professional B.E.D. (LA); the first professional degree (B.L.A.); and a graduate degree on a professional track (B.L.A./

M.L.A.) or a research track (M.L.A.). The M.L.A. is offered through the Graduate School. Information about the degrees is available from the College of Architecture and Landscape Architecture, 110 Architecture Building, 89 Church Street S.E., Minneapolis, MN 55455.

New Degree Plans

CALA is considering significant curricular revisions. New offerings for the professional degrees and new admissions criteria may be approved during the 1992-93 year. If you are considering entry to professional degree studies in architecture or landscape architecture for fall 1993 or later, you should contact the CALA office for access to the most up-to-date information on requirements, opportunities, and procedures.

College of Biological Sciences

The College of Biological Sciences (CBS) is an upper division college in the University that students may enter at the beginning of the junior or senior year. (CBS will begin admitting sophomores in the fall of 1993.) CBS offers the B.S. degree with majors in biochemistry; biology; ecology, evolution and behavior; genetics and cell biology; microbiology; and plant biology. An individually designed program also is available for those students with special interests. All majors require a common core of biology, chemistry, physics, and mathematics courses.

As soon as you decide to major in a bio-science area, you should contact an adviser in the college's Student Services Undergraduate Advising Office, 223 Snyder Hall, University of Minnesota, 1475 Gortner Avenue, St. Paul, MN 55108 (612/624-9717). You will register as a pre-biology major until you complete certain admission courses.

Specific requirements for admission to CBS include a minimum of 84 quarter credits (with grades of C or better), including a general biology course (1009) and two quarters each of general chemistry (Chem 1051-1052), and calculus (Math 1251-1252).

Sophomores admitted in the fall of 1993 will be required to complete a minimum of 40 credits with a GPA of 2.50 or better, including grades of C or better in Chem 1051-1052 (or equivalent); Math 1251 (or equivalent); and a college-level biology course.

You are strongly encouraged, especially if you are transferring from another institution, to complete the third quarter of calculus (Math 1261 or equivalent) before your first quarter of enrollment in CBS. Biochemistry majors also are required to complete Math 3251 or equivalent for graduation.

Bachelor of arts degrees in biology, biostatistics, microbiology, and physiology may be earned in the College of Liberal Arts. See the listings for these programs in the second section of this bulletin.

School of Dentistry

The program in dentistry for the D.D.S. degree admits a beginning class once a year, in the fall. The bachelor's degree is no longer offered through the University of Minnesota School of Dentistry. However, a bachelor's degree can still be earned while completing the dental curriculum if the institution at which the individual undertook preprofessional coursework offers such a program and awards the degree independently.

Admission—A minimum of 130 quarter credits of liberal arts courses from an accredited U.S. or Canadian college is required.

A limit of 96 quarter credits from community or junior colleges will be applied to the 135 required quarter credits, or to the 180 quarter credits of a four-year classification. Although acceptance is based primarily on performance quality, applicants are encouraged to have a broad liberal education.

An overall GPA of 2.50 is the minimum required for admission consideration. However, acceptance is on a competitive basis and an average well above this is usually necessary to be admitted.

Required Courses and Credits—(science courses must include laboratory instruction):

English—12 quarter cr: two composition and one speech course preferred; or one speech course, one composition course and one additional course in either literature or humanities that has a composition component.

Math—A minimum of 3 quarter cr in one of the following courses: college algebra or precalculus by college credit or college validation or a course in computer science or statistics (upper division preferred): Math 1031, 1051, or 1151.

General Chemistry—12 quarter cr: complete basic course series required. Chem 1051-1052 and 3100-3101.

Organic Chemistry—8-10 quarter cr: Chem 3301-3302 and 3305-3306. Course content must include study of both the aliphatic and aromatic series.

Biology—10 quarter cr: two quarters of biology or one quarter each of biology and zoology—Biol 1009 and 1106 or 3011.

Physics—10-12 quarter cr: Calculus-based physics should be taken by students who plan advanced work in dentistry: Phys 1041-1042 and 1045-1046 or 1104-1105-1106 and 1107-1108-1109. Complete basic course series required.

Applied Human Psychology—At least 4 quarter cr in general human psychology, child and adolescent human psychology, or business psychology; Psy 1001.

It is strongly recommended that required courses be completed by the end of the academic year before the fall of enrollment.

Only under unusual circumstances will S credits be accepted in required courses. S credits in elective courses should not exceed 10% for three-year applicants (135 credits) and 15% for four-year applicants (178 credits). I (incomplete) grades are looked on with disfavor by the Admissions Committee. All I grades and any W (withdrawal) grade in excess of one per academic year must be explained in the application.

Recommended Elective Courses—Elective courses should be selected to achieve as broad and liberal an education as possible. However, students are encouraged to take the following preferred electives: art, biochemistry, cell biology, histology, human anatomy, microbiology, and physiology. These electives are especially important for students who have completed only the minimum credits required (130 quarter credits) to enter dental school.

Admission Tests—The required Dental Admission Test (DAT) is given two times a year, usually in the spring and fall. It is wise to take the test soon after required science courses are completed. It is recommended that the test be taken during the fall test date of the preceding academic year for enrollment the following year. However, it is acceptable for applicants to take the DAT on the spring test date of the same year they can expect to enter dental school. The test measures general academic achievement, comprehension of scientific information and perceptual ability. A review of biology, general chemistry, and organic chemistry is urged. Application forms for the DAT may be obtained from the School of Dentistry, or the CLA Pre-Health Science Advising Center, 30 Johnston Hall.

Residence Requirements—First priority is given to Minnesota residents, second to residents of neighboring states or provinces with which the University of Minnesota has contract or reciprocity agreements or special tuition arrangements, and third to other nonresidents who have acceptable reasons for attending the University School of Dentistry.

English Proficiency Requirement—The School of Dentistry requires that all applicants who are not native speakers of English submit written evidence of a minimum TOEFL score of 550, with a minimum score of 55 in Part I, Aural Comprehension, or a minimum score of 85 in the MELAB with a minimum score of 85 in Part II, Listening.

The test(s) must have been administered within the last two years. The School of Dentistry requires a re-testing of all applicants who were given the test(s) more than two years before their date of application to the School of Dentistry.

Early Admission—The school offers an early admission program for prospective students. During their sophomore year of undergraduate study, students must meet with the School of Dentistry Enrollment Management staff to plan their prerequisite and elective coursework. At that time, a provisional acceptance may be granted to qualified applicants for the appropriate entering first-year class. Qualified applicants must maintain a minimum 3.00 overall GPA while completing specified prerequisite and elective courses. Students must also take the DAT and score at or above the national average (15). For further details, contact the School of Dentistry (612/625-7149).

Further information about application procedures, admission, qualifications, and related matters may be obtained from the CLA Pre-Health Science Advising Center, 30 Johnston Hall; the School of Dentistry, Office of Enrollment Management, 15-106 Malcolm Moos Health Sciences Tower; or the *School of Dentistry Bulletin*.

Division of Dental Hygiene

A four-year curriculum in dental hygiene leads to the bachelor of science degree.

After completing the required preprofessional courses in CLA or another accepted institution with satisfactory academic performance, you may apply to the professional program. The three years of the professional program are spent in the School of Dentistry Division of Dental Hygiene.

For information about admissions, consult advisers in the Dental Hygiene Office, 9-436 Moos Tower (612/625-9121), or in the CLA Pre-Health Science Advising Center, 30 Johnston Hall (612/624-9006). Details about the program are available in the *School of Dentistry Bulletin*.

College of Education

The College of Education currently is revising teacher education programs in elementary, secondary, vocational, and physical education. Students wishing to qualify for licensure in agricultural, art, business, elementary, industrial, marketing or physical education; English; home economics; mathematics; second languages and cultures; science; or social studies must first earn a bachelor's degree (e.g., B.A., B.S.) in a major field related to the area in which the student wishes to teach. By summer session 1992 most of the teacher licensure programs will change to the postbaccalaureate level. It is strongly recommended that applicants attend an information advising meeting before applying. Information regarding these sessions and specific program information may be obtained from the admissions unit in the Education Student Affairs Office, 1425 University Avenue S.E., Minneapolis, MN 55414 (612/625-6501).

The number of applicants admitted to the College of Education varies according to program areas. Beyond the general admission guidelines set by the college, other qualifications, including leadership skills, prior experience in working with appropriately aged people and people from diverse cultural backgrounds, and education-related work or volunteer experience is normally expected. Because enrollments are limited and the process of admission to all College of Education programs is competitive, not all applicants who meet the minimum admission standards will be admitted. The college is committed to recruiting, enrolling, and educating a diverse population of students representing the composition of society. Preference is given to applicants with strong academic records and experience in educational settings.

Admission to Postbaccalaureate Programs—Students must have earned at least a 2.80 GPA (2.50 for agricultural, science, and math education) in all previous college coursework to be considered for admission.

In addition, students must have earned a 3.00 GPA in their undergraduate major coursework to be considered for admission to English, second languages and cultures, and social studies programs. Additional procedures specified at the time of application also must be completed for admission. The MLA Proficiency Examination is required for second languages and cultures. Quarters of admission vary by program area. For specific program information, contact the Education Student Affairs Office in the College of Education at 612/625-6501.

Admission to Undergraduate Programs—Students planning to seek state of Minnesota teacher licensure upon graduation from the University of Minnesota must complete a licensure program in the College of Education. For information regarding the transition from undergraduate to postbaccalaureate programs, contact the admissions unit in the Education Student Affairs Office at 612/625-1550.

One-Year Pre-Education Programs in CLA—If you are planning to enter a College of Education program in business, industrial, marketing, or vocational-industrial education; or recreation, park, and leisure studies, you usually spend one year in CLA. To be considered for admission, you must meet the minimum overall and major GPA requirements as established by specific programs within the college.

Requirements for Transfer to Elementary Education—Course requirements for the two preparatory years before entering the elementary education curriculum are specifically outlined; prospective applicants should obtain information from the CLA Premajor Advising Office, the Education Student Affairs Office, or from the *College of Education Bulletin*. A minimum GPA of 2.50 is required for consideration, but few students with a GPA below 2.75 are admitted. Therefore, admission is not guaranteed. Only A-F credits are accepted, except in elective and minor courses. Undergraduate students are admitted to this program only for fall and winter quarters.

Two-Year Pre-Education Programs in CLA—Undergraduate programs in agricultural, business, early childhood, elementary, industrial, marketing education; kinesiology; and mathematics require two years of CLA work—at least 90 credits. To be considered for admission, you must meet the English composition and distribution requirements as listed in the *College of Education Bulletin*, and meet the prerequisites and minimum overall and major GPA requirements as established by specific programs within the college.

Information about education programs is available at the Education Student Affairs Office, University of Minnesota, 1425 University Avenue S.E., Minneapolis, MN 55414 (612/625-6501).

School of Journalism and Mass Communication

The minimum requirement for admission to the master's and doctoral programs is the B.A. or its equivalent. If the undergraduate major is not in journalism, 12 to 16 credits of preparatory work completed during the first year of graduate study are usually required. Selection of preparatory courses must be approved by an adviser. Acceptable professional experience may sometimes be applied toward prerequisite requirements.

Two types of master's degree programs are offered—the general mass communication M.A. and the professional M.A. The M.A. program, whether general or professional, emphasizes the theoretical study of mass communication and analysis of media systems. Students completing the general program are particularly suited for careers in communication, policy, or teaching at the community college level; they may also wish to pursue further graduate study. The professional program combines general study in mass communication with professional skills courses. This means seminars and enrichment lecture courses are blended with professional courses in M.A. programs of individuals seeking careers in print and broadcast media, advertising, or visual

communication. Professional coursework typically will constitute a minority of the M.A. professional program plan.

The doctoral program offers training for academic careers in communication, research, or communication policy. Areas of specialization include media sociology, communication law and regulation, media ethics, media management and economics, international mass communication, history of mass communication, visual communication, research theory and methodology, advertising, and mass communication technology.

Additional information is available from the Director of Graduate Studies, School of Journalism and Mass Communication, 111 Murphy Hall, 206 Church Street S.E., Minneapolis, MN 55455 (612/625-4054).

Law School

Requirements for Admission and for Degree in Law—The Law School offers the professional degree juris doctor (J.D.), which qualifies graduates to take the bar examination for admission to practice. The course of study requires three academic years in the Law School.

Admission to the Law School requires a bachelor's degree or its equivalent. No particular prelaw college program is recommended; in fact, the Law School is interested in a student body with varied backgrounds, and you are encouraged to follow your own interests in choosing an undergraduate major. Applications for admission should be submitted by March 1 for the class entering the school the following August.

Information about admission requirements and the Law School program may be found in the *Law School Bulletin*. Prelaw scholastic records and the results of the Law School Admission Test (LSAT) are given the most weight in admission decisions; scholastic honors, extracurricular activities, personal statements, letters of recommendation, and work experience also will be considered. The test is given four times each

year at the University and at test centers throughout the country. You must take the test by February of the year for which you seek admission; taking it earlier, however, is strongly recommended. Information pamphlets and applications for the LSAT may be obtained at the Law School admissions office; University Counseling Services, 101 Eddy Hall; or Law Services, Box 2000, Newtown, PA 18940.

Carlson School of Management

The Carlson School of Management (CSOM) offers two programs for the bachelor of science degree: general management and accounting. If you are interested in admission to the school, you should contact your college advising office or the Undergraduate Studies Office, 290 Humphrey Center, to obtain the following materials: premanagement planning sheets, foreign studies brochures, scholarship lists, and college bulletins.

The premanagement program includes both liberal education and introductory coursework in accounting, economics, computing, and statistics. Because of the wide social responsibilities of business management, approximately half the credits required for a Carlson School degree must be in liberal education coursework.

Although students selected for admission to the school normally have completed their first two years of college, a limited number of new freshmen are accepted into the school's *Preferred Admission Program*. Selection is based primarily on high school academic performance, test scores, and extracurricular achievement. Contact the Undergraduate Studies Office, 290 Humphrey Center (612/624-1517) for complete details.

CLA students considering applying to the Carlson School who have completed at least 39 credits with a GPA of 2.80 or higher are encouraged to request *Premanagement* status. This status itself does not guarantee admission priority, but services will be provided to help you prepare for successful application.

Because of resource limitations, admission to the Carlson School of Management is competitive. Applicants are evaluated in three areas: overall academic record, performance in the specific management-related "tool" courses listed below, and accomplishments and achievement outside the classroom.

The first two areas are evaluated on the basis of academic transcripts. Most students admitted in recent years have had GPAs well above 3.00; very few have had GPAs below 2.80. The third area is assessed on the basis of information students provide in the Application Addendum. Prospective applicants are encouraged to pick up a copy of the addendum early in their premanagement planning.

Lower Division Major Requirements

CSOM "Tool" Courses (A-F only)

- Principles of Accounting (Acct 1050 or equivalent)
- Microeconomics (Econ 1101 or equivalent)
- Macroeconomics (Econ 1102 or equivalent)
- Information and Decision Sciences 1010 or equivalent
- Operations and Management Sciences 1020 or equivalent statistics course
- Calculus (Math 1142 or 1251 [1211] or equivalent)

Other lower division major requirements

- General Psychology (4 cr min; A-F only)
- One class from the following (A-F only): CSci 3101, 3102, 3113, 3121, Engl 3851, Ling 3001, 3111, Math 1131, 1252, Phil 1001
- One international/global social science course

General Education Requirements

Group A: Language, Logic, Mathematics, and the Study of Argument

- Freshman Composition (A-F only)
- Symbolic Systems (met by major requirements)

Group B: The Physical and Biological Universe

- Two science courses, one of which must be a lab science

CLA Preparation for Degree Work in Other Colleges

Group C: The Individual and Society

- Two Individual and Society courses beyond those noted in the major requirements

Group D: Literary and Artistic Expression

- Any two Group D courses

Electives will complete the required 90 credits

A second language (three college quarters or two high school years of the same second language) is required for all students admitted to the Carlson School fall 1993 or later. If you are applying before fall 1993, consult your advising office regarding your requirements.

If you have taken a course at another institution that you believe is equivalent to any of the above requirements, please check with a Carlson School adviser before registering.

A course taken fall 1992 or later in which a grade of D+, D, or D- was earned may be repeated once. Although the credits will be counted only once, the original grade and the second grade will be averaged in determining GPAs for purposes of admission. The Carlson School counts all grades of N earned fall 1987 or later and all grades of F as zero grade points in the student's admission GPA.

Plus/minus grades earned in required lower division CSOM courses (IDSc 1010, OMS 1020, and Acct 1050) will be used in calculating admission GPAs.

Medical School

Students admitted to the Medical School must complete baccalaureate degrees before they begin medical study. Prospective students should plan appropriate premedical programs.

Premedical Advising—Premedical advisers are available in the CLA Pre-Health Science Advising Center, 30 Johnston Hall, for aid in premedical program planning and guidance in application to medical schools. The Pre-Health Science Library, 30 Johnston Hall, provides career information about medical

and allied health fields and admission information for all U.S. and Canadian medical schools.

If you are interested in enrolling in the Medical School of the University, refer to the *Medical School Bulletin*. Each year, the monograph, *Medical School Admission Requirements*, is published by the Association of American Medical Colleges; it provides up-to-date information about admission requirements for all medical schools in the United States and Canada.

Premedical Requirements—There is no prescribed premedical major—any recognized college major is acceptable. Science majors, contrary to common belief, have no advantage over liberal arts majors for admission; indeed, the Medical School believes that liberal arts studies contribute greatly to well-rounded professional preparation.

The Admissions Committee has approved the following courses to fulfill the premedical requirements for the Twin Cities campus Medical School: 3 qtrs of English (including composition and literature); mathematics through calculus (Math 1142 or 1251-1252) or upper-level statistics/biostatistics (beginning with the Medical School class admitted for fall 1995, upper-level biostatistics will be required for admission); Chem 1051-1052, 3100-3101, 3301, 3302, 3305, 3306 (29 cr); Biol 1009 plus 5 cr of animal biology or zoology, (genetics recommended); Phys 1104-1105-1106 and 1107-1108-1109 or 1251-1252-1253-1254; at least 27 cr taken A-F in humanities, social sciences, second language, or other liberal arts courses.

Premedical students with outstanding academic records in science and mathematics, especially those who contemplate careers in research or academic medicine, are strongly advised to elect work in these fields beyond the basic requirements. Reading knowledge of a second language, though not a requirement for admission, is recommended if you are interested in medical research or graduate medical training.

Application Procedures—Applications are not submitted to the Medical School directly; rather, they must be submitted to the American Medical College Application Service (AMCAS). Application forms for AMCAS may be obtained in the Pre-Health Science Advising Center. They must be filed before November 15 of the preceding academic year for enrollment the following fall; it is advisable to submit one's application as soon after June 15 as spring quarter grades are available. You must take the Medical College Admission Test (spring MCAT preferred). Information about registering for this test is available in the Pre-Health Science Advising Center.

The Medical School will request further information from you after receiving the AMCAS application. Letters of evaluation will be requested, and you should plan for them early in your college program by selecting special programs or other opportunities leading to direct and meaningful faculty contact.

Medical Schools in Minnesota—The University of Minnesota, Duluth offers two years of basic medical sciences. Upon completion, the two final years of education in the clinical sciences are completed at the Twin Cities campus Medical School. The Mayo Medical School in Rochester is a private four-year medical school. The University of Minnesota medical schools give preference for admission to residents of Minnesota.

Division of Medical Technology

The baccalaureate program in medical technology leads to the bachelor of science degree.

After completing 90 CLA credits, including all required courses, with satisfactory academic performance, you may apply for admission to the professional program. The professional program encompasses eight quarters, and may be accelerated to 15 months for those students who already hold a baccalaureate degree and have completed required coursework.

The following courses or their equivalents are prerequisites for admission to the junior year: completion of writing practice requirement or exemption; Chem 1051-1052, 3100-3101, 3301, 3302, 3305, 3306; Biol 1009; CBN 3001; Math 1111 or 1201 or 1251; Phys 1041-1042 and 1045-1046. Electives should include subjects that satisfy distribution requirements.

The *Health Sciences Programs Bulletin* contains a suggested program for the first two years of preprofessional study. You may also consult advisers in the Medical Technology Office, 15-170 Phillips-Wangensteen Building (612/625-9490). Registration each quarter must be reviewed by an adviser.

Program of Mortuary Science

The baccalaureate curriculum of the Program of Mortuary Science leads to a bachelor of science degree.

To be admitted to the program, you must have completed 90 quarter credits with grades of A, B, C, or S of liberal arts study at any accredited university, college, or junior college.

If you are a freshman or sophomore in CLA, you will be assigned a department adviser to assist in course selection, registration, and academic decisions. Registration must be approved by the adviser each quarter.

You should determine a core area of interest and select prerequisite courses in preparation for advanced courses. The department requires 15 3xxx-5xxx credits outside the major area.

Admission Requirements—The 90 credits required for admission must include work in the following courses or areas: completion of two composition courses (one upper division course preferred); Mortuary Science Group A, 12-16 cr in speech, accounting, medical terminology, computer science, and electives; Mortuary Science Group B, 18-24 cr, including one general course each in biology, chemistry, human anatomy, microbiology, public health, and labs in two

disciplines; Mortuary Science Group C, 20-24 cr, with a minimum of 12 cr in psychology and sociology, including a general course in each; Mortuary Science Group D, 12-15 cr of electives; Business Studies, 8 cr, introduction to business and small business operation courses.

If you plan to practice in a state other than Minnesota, you should request information about specific licensure requirements. Information is available at the department office, A275 Mayo, 401 Church Street S.E., Minneapolis, MN (612/624-6464), and in the *Health Sciences Programs Bulletin*.

School of Nursing

The School of Nursing offers a bachelor of science in nursing. Students are selected for admission as juniors after completing two years of liberal arts studies (90 quarter credits) in any accredited college or university. The program prepares students for entry-level positions in all fields of professional nursing, including public health.

The preferred GPA for admission is 2.80. However, several other factors are considered, including ACT scores, trend in academic performance, and a goal statement that identifies nursing, education, and life experiences.

The 90 credits required for admission must include the following coursework: English composition (4-6 cr); general chemistry (8 cr); general biology (4 cr); cultural anthropology (3 cr); introductory sociology (3 cr); general psychology (3 cr); biochemistry or organic chemistry (4 cr); abnormal psychology (4 cr); family theory (3 cr); small group dynamics (3 cr); human anatomy (4 cr); human physiology (4 cr); microbiology (3 cr); basic/general nutrition (3 cr); statistics (3 cr); upper division writing (4 cr). The remaining required credits could include selections from group D.

Students are also required to complete Standard Aid and Cardiopulmonary Resuscitation certification before admission. Admitted students are required to have a physical examination before enrolling.

If you are already a registered nurse and want to complete a baccalaureate or master's degree, the School of Nursing offers the RN/B.S.N./M.S. program. This program includes independent study and has its own requirements.

For information about admission to all nursing programs, contact the School of Nursing Admissions Office, 5-160F Health Science Unit F (612/624-3108). A pre-nursing CLA adviser is also available in 30 Johnston Hall (612/624-9006) and can assist with course selection, registration, and academic planning.

Further admission information may be found in the *School of Nursing Bulletin*.

Program in Occupational Therapy

The program in occupational therapy, requiring four years plus one quarter of study, leads to the B.S. degree.

Preparation for professional study in occupational therapy requires completion of 80 to 85 credits in a college of liberal arts in courses selected to meet the distribution requirements outlined in the *Health Sciences Programs Bulletin*. You must complete these courses with a 2.50 GPA to be eligible for admission.

During the junior and senior years, hospital and community agency practice is coordinated with theoretical courses. In the senior year, six months of full-time fieldwork training is scheduled in hospitals, institutions, and community centers.

Freshman and sophomore students should see advisers in the CLA Pre-Health Science Advising Center, 30 Johnston Hall (612/624-9006). For detailed information, see the program bulletin or call the program office, 271 Children's Rehabilitation Center (612/626-5887), for an appointment with a faculty member.

College of Pharmacy

The College of Pharmacy bachelor of science (B.S.) in pharmacy degree program is the basic preparation for pharmacy practice in hospitals, community pharma-

cies, health maintenance organizations, extended care facilities, industry, and government. This program requires three years of professional study, preceded by two years of preprofessional study in an accredited college.

The College of Pharmacy doctor of pharmacy (Pharm.D.) degree program prepares pharmacists to be specialists in drug therapy. This program requires four years of professional study and is open to College of Pharmacy students who have completed two years of professional coursework with a minimum GPA of 2.60. The doctor of pharmacy program also is open to applicants who hold a B.S. in pharmacy degree. These students complete the Pharm.D. degree after approximately two years of study if their professional coursework was taken at a college of pharmacy accredited by the American Council on Pharmaceutical Education; otherwise, approximately three years of study are required.

Graduates of either the B.S. or Pharm.D. program are eligible for the state licensure examination to practice pharmacy.

The two-year prepharmacy program, consisting of at least 90 credits, may be completed in the College of Liberal Arts. Information about specific course requirements can be obtained from the College of Pharmacy Office of Student Affairs, 5-110 Health Sciences Unit F (612/624-9490) or from the CLA Pre-Health Science Advising Center, 30 Johnston Hall (612/624-9006).

For applications and information about applying, contact the College of Pharmacy Office of Student Affairs. Besides completing the proper application forms, all applicants must submit two official transcripts from each college attended, three letters of recommendation, and an application fee if they have not previously enrolled at the University. Applicants are evaluated on the basis of prior academic achievement, work experience, letters of recommendation, and a personal goals statement. In 1991, the average GPA of entering students was 3.41. Applicants whose native language is not English should contact the College of Pharmacy Office of Student Affairs for information on language skills-assessment requirements.



Program in Physical Therapy

The four-year program in physical therapy leads to a B.S. degree. The first two years are spent in the College of Liberal Arts. To be considered for admission to the professional program, you must have completed a minimum of 86 credits, including specified required courses or their equivalents, with a minimum GPA of 2.50 in basic sciences. Work and/or volunteer experience in a health care setting is also required. The last two years plus a summer term are spent in the Department of Physical Medicine and Rehabilitation.

For information about admission, consult advisers in the Physical Therapy Office, 271 Children's Rehabilitation Center (612/626-5887), or in the CLA Pre-Health Science Advising Center, 30 Johnston Hall (612/624-9006). Details about the program are available in the *Health Sciences Programs Bulletin*.

Hubert H. Humphrey Institute of Public Affairs

Professional study in the Hubert H. Humphrey Institute of Public Affairs is offered at the graduate level. Two master's degrees are offered, a master of arts (M.A.) in public affairs and a master of planning (M.P.) in public affairs. Both degrees offer students the basic skills required for effective careers in management, planning, policy analysis, and advocacy, as well as an advanced understanding of those areas of substantive policy in which concentrations are offered. The master of arts degree offers unusual flexibility by permitting a student to select two areas of concentration beyond the core requirements. The master of planning degree is a professional degree accredited by the American Institute of Certified Planners and the Association of Collegiate Schools of Planning.

For further information, contact the Humphrey Institute of Public Affairs, Humphrey Center, 301-19th Avenue S., Minneapolis, MN 55455 (612/625-9505).

School of Social Work

A bachelor of science in social work is desirable preparation for entry into the master of social work (M.S.W.) program, but it is not an absolute requirement; a bachelor's degree in any field will be considered if you have completed 39 social sciences credits. A course in statistics and a course in human biology are required for admission to the graduate program. In addition, applicants are expected to have completed either one year of supervised social work fieldwork instruction at the undergraduate level or a minimum of one year of paid or volunteer social work experience. Additional information about admission is presented in the *Graduate School Bulletin*.

University College

University College (UC) provides flexibility in program planning to undergraduates whose needs require the broad resources of the University. UC houses two baccalaureate degree programs on the Twin Cities campus.

The **Inter-College Program (ICP)**, 7 Wulling Hall (612/624-2004), an upper-division, credit-based baccalaureate degree program, draws upon the curricular offerings and other educational opportunities of the entire University community and incorporates both day school and extension registration.

The ICP degree provides an alternative to the traditionally structured degree and major by providing the flexibility of incorporating significant coursework from more than one college to individually design an education plan. The degree program may include two or three areas of concentration, or may integrate courses from two or more colleges into an interdisciplinary theme. An approved degree plan includes at least 75 upper division credits.

ICP students may earn either the B.A. or the B.S. degree. Each graduate's area of concentration will be noted on the final transcript.

For more information, call the program office and sign up for a "First Step" information session.

The Program for Individualized Learning, 201 Wesbrook Hall (612/624-4020), serves students with clear educational goals who wish to design and carry out individualized B.A. or B.S. degree programs. Students tend to select the program because they value the freedom to make significant choices about what and how they learn, have experiences they can use as foundations for further learning, and want to use a variety of educational resources at the University and in the community.

Students are admitted on the basis of evidence that they have the attributes and academic skills needed to pursue a self-directed degree program (e.g., skills in writing, project design, and educational planning). A degree program can incorporate a variety of learning resources, including University classes, independent study courses, and self-designed projects. Knowledge gained from independent learning before admission may be applied if it can be demonstrated and evaluated as college-level learning.

Students meet a set of standards, called graduation criteria, rather than accumulating a specific number of credits, to earn a bachelor's degree. 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: training and leadership development, urban planning and environmental policy, fiction writing, molecular and cell biology, and women's health.

Independent Study (UC 3075)—University College also provides an undergraduate independent study course for students who wish to pursue projects that go beyond the scope of any single department or college at the University. Projects are interdisciplinary or are done in departments that do not have

an appropriate undergraduate independent study course. Students will be asked to select an appropriate faculty monitor and to complete the UC 3075 Independent Study Contract before 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.

College of Veterinary Medicine

The College of Veterinary Medicine offers the doctor of veterinary medicine (D.V.M.) degree program, which students may enter only in fall quarter. A baccalaureate degree is not a requirement for admission. Those entering without a degree are eligible to receive the bachelor of science degree in veterinary science upon satisfactory completion of the second year of the D.V.M. program. Enrollment in the college is limited; therefore, some applicants cannot be accommodated. The college is committed to extending opportunities to students from socially, educationally, and economically disadvantaged backgrounds, including underrepresented minority groups.

Admission Criteria—Applicants for fall 1992 were rated on a 100-point scale based on the following areas of evaluation:

Objective measures of educational background (70 points): GPA in required courses (25 points); most recent cumulative GPA, starting with the fall the student applies and going back to include a minimum of 60 quarter (45 semester) credits of letter grades in undergraduate or graduate courses (15 points); Graduate Record Examination (20 points); multiplier of grade and test result points (10 points).

Subjective measures of personal experience (30 points): knowledge of and interest in the veterinary medical profession and animals—experiences with veterinarians and with the care and responsible management of animals (15 points); maturity and reliability—employment experiences and responsibilities, ability to communicate with

CLA Preparation for Degree Work in Other Colleges

others, leadership experience, extracurricular activities, academic load, and amount of time devoted to employment and other activities while enrolled in college (15 points.)

Selection criteria and point systems are subject to change.

Residency—In selecting applicants, the Committee on Admissions gives first priority to Minnesota residents, minority applicants, and residents of states with which contractual (North Dakota) or reciprocity (South Dakota) agreements exist. Residents of other states do gain admission and are encouraged to apply.

Required Courses for Admission—

A-F grading system except physics lab.

English: Comp 1011, one 3xxx-level Comp course, 3033 or 3015 recommended; *Math*: Math 1111 or 1142 or 1201 or 1251;

General Chemistry: Chem 1001, 1051-1052;

Organic Chemistry: Chem 3301-3302, 3305-

3306; *Biochemistry*: Biol 5001; *Biology*:

Biol 1009, 1106, or 3011; *Genetics*: GCB

3022; *Microbiology*: VPB 3103 or MicB

3103; *Physics*: Phys 1041-1042, 1045-1046

or three-quarter introductory sequence with

labs; Council on Liberal Education require-

ments as they relate to entering with or

without a baccalaureate degree (16-20 credits).

Application Procedures—

Application packets are available at the St. Paul Campus

Office of Admissions and Records, 130

Coffey Hall (612/624-4704), and are

processed by that office. Applications must

be postmarked no later than November 15

before the fall term of desired admission.

The Graduate Record Examination (GRE)

General Test is required, with the results to

be forwarded no later than March 1 of the

year of application. Further information can

be obtained from the CLA Health Science

Advising Center, 30 Johnston Hall (612/624-

9006); the Office of Student Affairs and

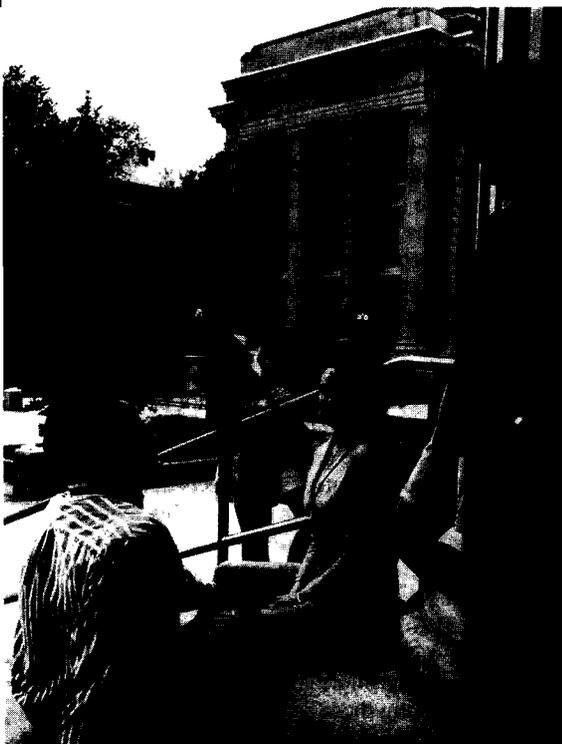
Recruitment, 460 Veterinary Teaching

Hospitals (612/624-4747); and the Office of Admissions and Records, 130 Coffey Hall.

The College of Veterinary Medicine's annual open house, on a Sunday in April, is the appropriate time to tour the facilities and meet students of the college.

College of Liberal Arts

General Education, World Studies, and Cultural Pluralism Courses



General Education, World Studies, and Cultural Pluralism Courses

Courses Used to Meet General Education Requirements

Listed below are courses approved for meeting CLA general education requirements described in section one. The list is updated quarterly and is available for consultation in college offices. Group designations are not assigned to directed studies, directed instruction, directed research, and topics courses except in a few cases (contact college offices for this list).

These guidelines will aid in planning general education coursework:

1. A maximum of 12 credits from any one department may be used among groups A-D, but courses from one department may be used in different groups if so classified.
2. General education requirements (except the group B laboratory requirement) may be met by examination (consult your college office). College Level Examination Program (CLEP) *general* exams may not be used to meet general education requirements.
3. Courses approved for the world studies and U.S. cultural pluralism requirements that also are approved for general education requirements may be used to fulfill both requirements.
4. Department honors courses or sections may be substituted for regular courses or sections unless otherwise specified. In a few cases, courses offered by the Honors Office also may be counted for general education credit (contact college office).
5. Courses used to meet the English composition requirement and the B.A. second language requirement may not be used to meet requirements.
6. At least one group B course must include a related laboratory that meets at least two class hours. Courses meeting this requirement are marked with an asterisk (*).
7. General education requirements for the B.F.A. and B.M. programs differ from those for B.A., B.I.S., or B.S. programs. See the first section or the music or studio arts offices for information about requirements. In meeting these requirements, however, students may select courses only from the following lists.

Group A—Language, Logic, Mathematics, and the Study of Argument

Study of formal languages and symbolic systems and their use in deduction, computation, information processing, and the study of natural language; analysis of argument as used in ordinary discourse and communication; theory, methods, and applications of logic, mathematics, statistics, computer science, linguistics, and rhetoric. (Requirement: 8 to 10 credits for B.A., B.I.S., and B.S.—normally two courses, at least one of which must deal specifically with a formal language or formal symbolic system.

Courses that can be used to fulfill the formal language requirement are identified with an asterisk.)

CSci *3113
Engl 3851; 3852
Fren 3701
Geog 1501; 3531
Ger 3704; 3705
Jpn 3451
Ling 3001
Math 1001; 1031; 1038; *1111; *1131; *1142; 1151;
*1171-1181-1191; *1201; *1251-1252; *1261;
*1551H-1552H; *1553H-3551H-3552H; *1711H-
1721H-1731H
Phil *1001; 1005; *3201; 3231
Pol *3085
Psy *3801
Soc *3801; *3802
Span 3701; 3702
Spch 1313
Stat *1001; *3011-3012; *3091

Group B—The Physical and Biological Universe

Observation, identification, description, experimental investigation, and theoretical explanation of natural phenomena; explorations and methods of the sciences of earth, space, matter, and life. (Requirement: 12 to 15 credits for B.A., B.I.S., and B.S.—three 4- or 5-credit courses, one to include a related laboratory. Two of the courses must be chosen from the list of group B foundation courses, courses basic to a natural science discipline. Courses in boldface are foundation courses. Laboratory courses are identified with an asterisk.) Students will not receive credit for a lab if they have not taken the accompanying course as well.

Anth 3001; 3002; 3005; 3006
 Ast 1011; *1015; 1021H; *1025H
 Biol 1008; *1009; 1101; *1103; *1106; 1301; 3112
 Chem *1001-1002; *1003; *1008; *1052-1052;
 *1051H-1052H; *3100-3101†; 3301; 3301
 EEB 1019; 3001
 GCB 3002 (if taken for four cr); 3022
 Geo 1001; *1002; 1005; 1011; 1012; 1019; *1021;
 *1111; 1601; *3112
 Geog 1401; *1425; 3431
 Phsl *1001
 Phys 1001; *1005; *1041-1042; 1061; *1065; 1071;
 *1075; 1104-1105-1106; *1107-1108-1109;
 *1251-*1252-1253-1254; 1271-1281-1291
 (Extension only); *1275-1285-1295 (Extension
 only); *1451H-*1452H-1453H-1454H; *1911-
 1912†
 Psy 3031; 3061
 WoSt 3202

Group C—The Individual and Society

(Requirement: 16 to 20 credits for B.A.,
 B.I.S., and B.S.—normally four courses—
 one in each of the three categories and a
 fourth in one of them.)

C-1. Individual and Institutional Behavior

Empirical study of individual and institu-
 tional behavior; empirical study of
 psychological, economic, social, cultural,
 geographical, and political phenomena.

Afro 1011; 3013; 3025; 3061; 3072
 AmIn 1771
 AmSt 3112; 3113; 3114
 Anth 1102; 3201; 3224
 Arch 3001; 3002
 Chic 3712
 CLit 3979
 CPsy 1301; 3309
 CICv 3201
 Clas 1201/3201
 CICv 3201
 CDis 3101
 EAS 3481
 Econ 1101; 1102; 1104; 1105; 3501; 3701; 3801
 Geog 1301; 3101; 3331; 3371
 ID 3170; 3180
 Jour 1001
 Ling 1005
 Mus 1602
 Pol 1001; 1025; 1026; 1054; 3051; 3321
 Psy 1001; 1004-1005†; 3011; 3014; 3101; 3201; 3604
 SALC 1506; 3506
 Serb 3511 (Extension only)
 Soc 1001; 1003; 1004; 1651; 3102; 3201; 3401; 3481;
 3755
 UrbS 3104
 WoSt 1001; 1002; 1003; 3305; 3406

C-2. The Historical Perspective

Historical study of societies and cultures or
 major aspects thereof.

Afro 1021; 3001; 3002; 3324; 3421; 3954
 AmIn 3111; 3112
 ANE 3501; 3502; 3505
 Anth 1101; 3003
 ArtH 1002; 3252; 3577
 CAS 3531; 3611
 Chic 3105; 3106; 3107; 3441; 3442
 Chn 1201; 1202
 Clas 1001; 1002; 1003; 1004; 1005; 1006; 1023; 1024;
 1025; 1043; 3023; 3024; 3025; 3175; 3252
 EAS 1063; 1461; 1462; 1463
 Geog 3373
 Hist 1001 (Extension only); 1002 (Extension only);
 1003 (Extension only); 1011; 1012; 1013; 1021;
 1022; 1023; 1051 (Extension only); 1052
 (Extension only); 1053 (Extension only); 1101
 (Extension only); 1151 (Extension only); 1152
 (Extension only); 1301; 1302; 1303; 1305; 3001
 (Extension only); 3002 (Extension only); 3003
 (Extension only); 3051; 3052; 3053; 3101; 3151;
 3152; 3244; 3245; 3401; 3402; 3424; 3431; 3432;
 3461; 3462; 3463; 3505; 3541; 3542; 3543; 3547;
 3614; 3615; 3627; 3631; 3636; 3637; 3641; 3642;
 3704; 3707; 3708; 3709; 3714; 3871; 3872
 HMed 3001; 3002; 3003
 HSci 1711; 1712; 1713; 1811; 1812; 1813; 3711; 3712;
 3713; 3811; 3812; 3813
 Hum 1001; 1002; 1003; 1004; 1005; 1111; 1113; 1115;
 1117; 1119; 1302; 3254; 3458; 3472; 3635
 JwSt 3521
 LAS 3131; 3401; 3402
 MELC 3508
 MidE 3505; 3507; 3508; 3511; 3512; 3541; 3542; 3543
 RelS 3501; 3502; 3505; 3508
 SALC 3501; 3502
 Scan 1504
 SCAS 3531; 3611
 Soc 3477; 3954
 SoAS 3501; 3502; 3611
 WoSt 3103

C-3. Social and Philosophical Analysis

Analytical study of social, political, moral,
 philosophical, and religious thought.

Afro 3011
 AmIn 3026; 3036; 3211
 AmSt 1001; 1002; 1003
 ArtH 3035
 CAS 3521; 3601
 Clas 1042; 3035; 3071; 3072; 3073
 EAS 1032
 Hebr 3301
 Hist 3281; 3282
 Hum 1303; 3176; 3196
 ID 3101; 3333 (Extension only)
 JwSt 1034; 3034
 MidE 1536; 3521; 3555; 3601
 Phil 1002; 1003; 1004; 3001; 3002; 3003; 3004; 3302;
 3304; 3305; 3307; 3308
 Pol 1041; 1061

General Education, World Studies, and Cultural Pluralism Courses

RelS 1001 (Extension only); 1031 (Extension only);
1032 (Extension only); 1034 (Extension only);
1035 (Extension only); 1036 (Extension only);
3031; 3034; 3035; 3036; 3037; 3071; 3072; 3073;
3196; 3412; 3413

SALC 1504 (Extension only); 3411; 3412; 3413
WoSt 3102

Group D—Literary and Artistic Expression

Study of literature, music, the visual arts, theatre, and film; analysis of significant works of literature and the other arts; and study of principles and techniques of criticism. (Requirement: 12 to 15 credits for B.A., B.I.S., and B.S.—normally three courses.)

Afro 3514; 3591; 3592; 3601; 3654

AmIn 3116

AmSt 3111

ANE 1001; 1002; 1003; 3001; 3002; 3003; 3251

Arab 3213; 3301; 3302; 3303

Arch 1021; 1022; 1023; 1071 (Extension only); 1072
(Extension only); 1073 (Extension only)

Arth 1001; 1016; 1921; 3001; 3008; 3009; 3011; 3012;
3013; 3014; 3015; 3017; 3325; 3484

ArtS 1101; 1301; 1302; 1401; 1404; 1510; 1520; 1530;
1540 (1510, 1520, 1530, and 1540 may be taken
only once to meet group D requirements); 1602
(Extension only); 1701; 1811; 1812; 3131; 3306;
3655 (Extension only)

Chic 3213; 3507; 3508

Chn 3161; 3162; 3163; 3165

CICv 3510; 3711

Clas 3001; 3002; 3003; 3008; 3065; 3081; 3082; 3083

CLit 1921; 3332; 3931

Dnce 1101; 3401; 3402; 3666

EAS 3013; 3020

Engl 1005; 1013; 1016; 1017; 1018; 1019; 1069; 1241;
1591; 1595; 1621; 1671; 3008; 3009; 3115; 3116;
3117; 3118; 3119; 3121; 3218; 3241; 3242; 3251;
3252; 3355; 3356; 3357; 3411; 3412; 3413; 3591;
3592; 3621; 3631; 3651; 3671; 3711

EngW 1101

Fren 3101; 3103; 3207; 3229

Ger 3104; 3105

Hebr 3304; 3307

Hum 1301; 3172; 3174; 3256; 3701

Ital 3303; 3305

Jpn 3161; 3163; 3164; 3165

JwSt 3115; 3315

LAS 3104; 3213; 3507; 3508

Lat 3440

MELC 3213

Mus 1001; 1003; 1004; 1021; 1051; 1052; 1531; 1804;
3021; 3410; 3420; 3430 (max 4 cr allowed for
group D in 3410, 3420, and 3430); 3707
(Extension only)

Phil 3502

RelS 3115; 3201; 3202; 3203; 3213; 3251

Russ 3421; 3422

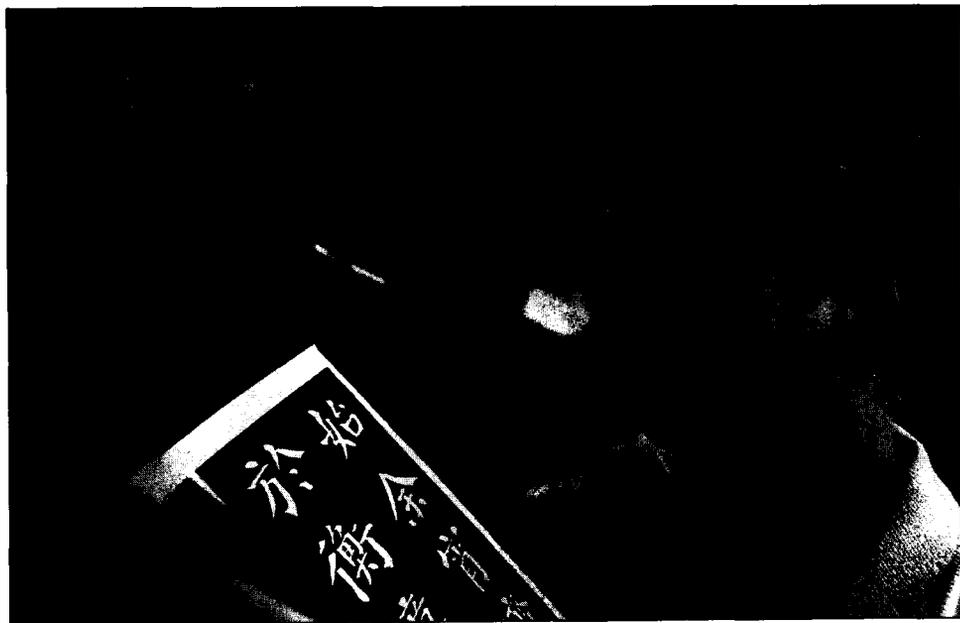
SALC 3456

Scan 3503; 3505; 3601; 3602; 3604; 3605; 3607; 3618

Span 3104; 3211; 3212; 3213; 3614

Th 1101; 1102; 1301; 1805; 3171; 3172; 3173

WoSt 3303; 3304; 3306; 3307; 3308



Courses Used to Meet World Studies Requirement

The world studies disciplinary or interdisciplinary courses deal with major aspects of the cultures of Asia, Africa, and Latin America and traditional American Indian cultures. (Requirement: two courses, normally 8-10 credits for B.A. and B.I.S. degrees.) Courses listed below may be used to fulfill the requirement. Honors courses or sections and courses cross-listed in other departments may be substituted for these courses. There is no restriction on the use of these courses to satisfy any other requirement.

Afro 1021; 3001; 3002; 3011; 3013; 3421; 3514; 3601; 3654; 5142; 5301; 5341; 5678; 5800; 5876
 AmIn 1771; 3121; 3211; 3242; 5251; 5341; 5411; 5422
 AmSt 3404
 ANE 3101; 3117; 3251; 3501; 3502; 3505; 5501; 5502; 5505
 Anth 1102; 3003; 3131; 3211; 3222; 3223; 3224; 3241; 3261; 3293; 3303; 3521; 3924; 5102; 5112; 5114; 5115; 5116; 5118; 5121; 5131; 5132; 5141; 5151; 5153; 5154; 5161
 Arab 3213; 3301; 3302; 3303; 5001; 5501; 5502; 5503
 Arch 5057
 Arth 1016; 3013; 3014; 3015; 3017; 3142; 5725; 5765; 5766; 5767; 5769; 5775; 5776; 5777; 5911
 CAS 3521; 3531; 3611
 Chic 3105; 3375; 3427
 Chn 1201; 1202; 3161; 3162; 3163; 3165
 Clas 3142
 CPsy 5332
 Dnce 3551; 5487
 EAS 1032; 1063; 1461; 1462; 1463; 3013; 3020; 3211; 3315; 3464; 3465; 3467; 3468; 3471; 3474; 3481; 3808; 5481
 Econ 3315; 5301; 5315; 5331
 Engl 1595; 5862
 FoSt 1120/3120; 1240/3240
 Geog 3121; 3131; 3141; 3211; 3212; 3213; 3215; 3221; 5131; 5132; 5142; 5211; 5212; 5215
 Hebr 3301; 3304; 3307
 Hist 1011 (Extension only); 1012 (Extension only); 1013 (Extension only); 1051 (Extension only); 3043; 3051; 3401; 3402; 3403; 3410; 3411; 3412; 3424; 3425; 3426; 3427; 3431; 3432; 3434; 3450; 3461; 3462; 3463; 3464; 3465; 3467; 3468; 3471; 3480; 3481; 3484; 3488; 3489; 3491; 3505; 3541; 3542; 3543; 3544; 3547; 3551; 3552; 5137; 5420; 5432; 5444; 5445; 5447; 5461; 5463; 5464; 5465; 5467; 5468; 5473; 5514; 5515; 5517; 5518; 5519; 5521; 5522; 5730; 5901; 5902; 5903; 5930; 5931
 Hum 5833
 Jpn 3162; 3163; 3164; 3165

JwSt 1034; 3034; 3100; 3315
 LAS 3131; 3134; 3222; 3401; 3402; 3403; 3521; 5101; 5120; 5479; 5930
 MidE 1536; 3213 3508; 3521; 3555; 5001; 5508
 Mus 1804; 3808; 5804; 5811
 Pol 3477; 5467; 5473; 5477; 5478; 5479
 Port 3501; 3502; 3602; 3603; 5210
 RelS 1031 (Extension only); 1032 (Extension only); 1034 (Extension only); 1036 (Extension only); 3031; 3034; 3036; 3037; 3100; 3213; 3251; 3412; 3413; 3501; 3502; 3505; 3508; 5031; 5036; 5505; 5508
 SALC 1054 (Extension only); 1506; 3202; 3411; 3412; 3413; 3414; 3501; 3502; 3506; 3607; 5202; 5203; 5411; 5412; 5413; 5414; 5500; 5520; 5535; 5710; 5833
 Soc 3315; 3481; 3551; 3671; 5481
 Span 1502; 1503; 3251; 3252; 3253; 3512
 SpPt 3605
 WoSt 1003; 3308; 3405; 5301; 5401

Courses Used to Meet U.S. Cultural Pluralism Requirement

The cultural pluralism disciplinary or interdisciplinary courses focus primarily on issues of social and cultural diversity, with special emphasis on issues of race and ethnicity. (Requirement: two courses, normally 8-10 credits for the B.A. and B.I.S. degrees for students who earned their first college credit fall 1986 or later.) Honors courses or sections and courses cross-listed in other departments may be substituted for these courses. The courses listed below may be used to fulfill this requirement.

Afro 1011; 3025; 3072; 3108; 3324; 3543; 3591; 3592; 3864; 3865; 3954; 5072; 5701; 5702
 AmIn 1771; 3026; 3036; 3111; 3112; 3116; 3211; 3242; 5251; 55341; 5411; 5422
 AmSt 1001; 1002; 1003; 3113; 3401; 3404
 Anth 3211; 3212
 Chic 3106; 3107; 3212; 3213; 3375; 3441; 3442; 3507; 3508; 3712
 CLit 3979
 Dnce 3486
 EAS 3868
 Engl 1591; 3591; 3592
 Geog 3101; 3375
 Hist 1305; 3441; 3442; 3801; 3812; 3864; 3865; 3867; 3868; 3871; 3872
 Ling 3812
 Pol 3739
 Soc 1004; 3951; 3954
 Th 1805
 UrbS 3301
 WoSt 1001; 3306; 3406

1986 Second Language Requirement

The 1986 Second Language Requirement went into effect fall 1986 for B.A., B.I.S., and B.F.A. students who entered college or who transferred into the college with fewer than 39 credits. It went into effect fall 1988 for B.A. and B.F.A. students who entered with 39 or more credits.

Graduation Requirement—The graduation requirement for the B.A., B.I.S., and B.F.A. degrees requires students to demonstrate proficiency usually attained after the first six quarters of college study in one language by passing a graduation proficiency examination that tests reading, writing, listening, and speaking skills.

Preparation Requirement—All entering freshmen will be expected to meet the University's 1991 second language entrance requirement (two years of high school language instruction). Students should contact the appropriate language department for testing and placement information.

Languages for which second language requirement graduation proficiency examinations are available include: American Sign Language, Arabic, Chinese, Biblical Greek, Classical Greek, Dakota, Danish, Dutch, Finnish, Irish, Italian, Japanese, Latin, Modern Hebrew, Norwegian, Portuguese, Russian, and Swedish.

Second Language Credit—For students graduating from CLA fall 1991 or later, credit will be awarded for all first-year language courses, including French, German, and Spanish. However, students should begin their second language study at the highest level their ability permits. Those who successfully complete a higher level language course (second quarter or higher with a grade of C or better or a grade of S) will automatically earn credit for all courses below the level at which they began language study in CLA. Students who plan to take no further language courses may take a special examination to earn credit for as many quarters of language as their skills permit.

College of Liberal Arts

Administration and Faculty



Administration and Faculty

University Board of Regents

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Jean B. Keffeler, Minneapolis, Vice Chair
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Mary J. Page, Olivia
Thomas R. Reagan, Gilbert
David K. Roe, Minneapolis
Darrin M. Rosha, Owatonna
Stanley D. Sahlstrom, St. Cloud
Ann J. Wynia, St. Paul

University Administrators

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Finance and Operations
Ettore Infante, Senior Vice President for
Academic Affairs and Provost
C. Eugene Allen, Vice President for
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Economics
Robert E. Anderson, Vice President for
Health Sciences
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Sciences, and Engineering
Marvalene Hughes, Vice President for
Student Affairs
Mark B. Rotenberg, General Counsel

College of Liberal Arts Administrators

Julia M. Davis, Dean
Eugene Borgida, Associate Dean for
Planning and Fiscal Management
Susan Noakes, Associate Dean for Faculty
Peter Reed, Associate Dean for Academic
Programs
Barbara Becker, Director of Student
Academic Support Services
Gordon Hirsch, Director of Honors

College of Liberal Arts Faculty

**Recipient of the CLA Distinguished Teacher Award*
*†Recipient of the Horace T. Morse-Minnesota Alumni
Association Award for Outstanding Contributions to
Undergraduate Education*

Afro-American and African Studies

Ashshareef, Teirab, Assistant Professor
Ph.D., Indiana University
Arabic language and literature

Brewer, Rose, Associate Professor
Ph.D., Indiana University
Sociology

Coifman, Victoria, Assistant Professor
Ph.D., University of Wisconsin, Madison
African history

Pike, Charles, Assistant Professor
Ph.D., University of Wisconsin, Madison
African language and literature

Taborn, John, Associate Professor
Ph.D., University of Minnesota
Psychology

Wright, John, Associate Professor
Ph.D., University of Minnesota
Afro-American literature

American Studies

Delattre, Roland, Professor
Ph.D., Yale University
Ethics and religion

Kilpatrick, Alan, Assistant Professor
Ph.D., University of California, Los Angeles
MesoAmerican archaeology, Native American writers

King, Thomas, Associate Professor
Ph.D., University of Utah
Native Writers and the Indian in American Culture

May, Elaine Tyler, Professor
Ph.D., University of California, Los Angeles
History, women and family

May, Lary, Associate Professor
Ph.D., University of California, Los Angeles
American studies, post-World War II American history,
popular culture

Noble, David, Professor
Ph.D., University of Wisconsin, Madison
American studies, history, literature and language,
philosophy and religion

Prell, Riv-Ellen, Associate Professor
Ph.D., University of Chicago
U.S. ethnic and gender relations, anthropology of
America, ritual

Yates, Gayle Graham, Associate Professor
Ph.D., University of Minnesota
American studies, history, women's studies

Anthropology

Dunnigan, Timothy, Associate Professor
Ph.D., University of Arizona
Semantic anthropology, linguistic acculturation, Middle America, North America

Gerlach, Luther, Professor
Ph.D., University of London
Natural resources anthropology, social movements and cultural change, political ecology, Africa, United States

Gibbon, Guy, Professor
Ph.D., University of Wisconsin, Madison
Midwestern prehistoric and historic archaeology, philosophy and history of archaeology

Goodwin-Raheja, Gloria, Associate Professor
Ph.D., University of Chicago
Social and cultural anthropology, kinship and social organization, gender, language and folklore, ritual; India

Gudeman, Stephen, Professor
Ph.D., University of Cambridge, England
Social, structural, economic anthropology; Latin America

Hastorf, Christine, Associate Professor
Ph.D., University of California, Los Angeles
Food and agriculture, archaeology, political complexity, gender, paleoethnobotany; Andes

Ingham, John M., Professor
Ph.D., University of California, Berkeley
Culture and personality, symbolic anthropology; Middle America

Josephides, Lisette, Assistant Professor
Ph.D., University of London
Social anthropology, power and gender relations

Lipset, David M., Associate Professor
Ph.D., University of California, San Diego
Social and political anthropology, history of anthropology; Melanesia

Miller, Frank, Professor
Ph.D., Harvard University
Theories of change, development strategies, applied anthropology, analysis, research methods; Middle America, North America

Ogan, Eugene, Professor
Ph.D., Harvard University
Social anthropology, ethnology and history of Pacific Island cultures

*†Penn, Mischa, Associate Professor
B.A., University of Minnesota
Philosophical anthropology, culture theory, methodology, history of anthropology

Rowe, William, Professor
Ph.D., Cornell University
Sociocultural change, colonialism, Marxism; South Asia, New Guinea, Caribbean

*†Spector, Janet, Associate Professor
Ph.D., University of Wisconsin, Madison
Archaeology, ethnohistory, historic archaeology, environmental archaeology, prehistoric social systems, feminist anthropology; North America, Great Lakes

Wells, Peter S., Professor
Ph.D., Harvard University
Culture contact, economic behavior, signs and symbols, meanings; prehistoric and medieval Europe

Art History

Asher, Catherine, Assistant Professor
Ph.D., University of Minnesota
Islamic art and culture

Asher, Frederick, Professor
Ph.D., University of Chicago
Hindu and Buddhist sculpture and temple architecture of South Asia

Canedy, Norman, Professor
Ph.D., Columbia University
Italian Renaissance and Mannerist art

Haxthausen, Charles, Associate Professor
Ph.D., Columbia University
20th-century European art and art criticism, German Avant-Garde, theory of art history

Marling, Karal Ann, Professor
Ph.D., Bryn Mawr College
American art and popular culture

Nelson, Marion, Professor
Ph.D., University of Minnesota
Scandinavian art and architecture, 19th and 20th centuries; folk and decorative arts of America and Scandinavia

Poor, Robert, Professor
Ph.D., University of Chicago
East Asian art

Silberman, Robert, Associate Professor
Ph.D., Columbia University
Film studies, history of photography, 20th-century American art

Steyaert, John, Associate Professor
Ph.D., University of Michigan
Northern European art, 14th-16th centuries; late Gothic sculpture in the Netherlands and France

Administration and Faculty

Stoughton, Michael, Associate Professor
Ph.D., University of Michigan
European painting, sculpture, and architecture, 17th and 18th centuries

Weisberg, Gabriel, Professor
Ph.D., Johns Hopkins University
19th- and early 20th-century art, history of decorative art and history of graphic art

Arts, Studio

Baldwin, Guy, Associate Professor
M.F.A., University of Wisconsin
Sculpture

Bethke, Karl, Professor
M.F.A., University of Minnesota
Printmaking

Caglioti, Victor, Associate Professor
B.S., New York University
Drawing/Painting

Cowette, Thomas, Associate Professor
B.F.A., Minneapolis College of Art and Design
Drawing/Painting

Feinberg, David, Associate Professor
M.F.A., Cranbrook Academy of Art
Drawing/Painting

Gray, Lynn, Associate Professor
M.F.A., University of Oklahoma
Drawing/Painting

Hallman, Gary, Associate Professor
M.F.A., University of Minnesota
Photography

Henkel, James, Associate Professor
M.F.A. Florida State University
Photography

Hoard, Curtis, Professor
M.F.A., University of Wisconsin
Ceramics

Katsiaticas, Mary Diane, Professor
M.F.A., University of Washington, Seattle
Drawing/Painting

Krepps, Jerald, Associate Professor
M.F.A., Indiana University
Printmaking

Lane, Thomas, Associate Professor
M.F.A., Pennsylvania State University
Glass

Lucey, Susan, Associate Professor
M.F.A., Temple University
Sculpture

*Lyon, Joyce, Associate Professor
M.F.A., University of Minnesota
Drawing/Painting

Pharis, Mark, Associate Professor
University of Minnesota
Ceramics

Potratz, Wayne, Professor
M.A., University of California, Berkeley
Sculpture

Roode, William, Associate Professor
M.F.A., University of Iowa
Drawing/Painting

Rose, Thomas, Professor
M.A., University of California, Berkeley
Sculpture

Rowan, Herman, Professor
M.F.A., State University of Iowa
Drawing/Painting

Chicano Studies

Rojas, Guillermo, Associate Professor
Ph.D., University of Illinois
Chicano literature

Valdés, Dennis, Associate Professor
Ph.D., Michigan State University
History, labor

Classical and Near Eastern Studies

Alchermes, Joseph, Assistant Professor
Ph.D., New York University of Fine Arts
Ancient and Medieval Art, Byzantine literature and history

Belfiore, Elizabeth, Associate Professor
Ph.D., University of California, Los Angeles
Greek literature, philosophy

†Cooper, Frederick, Professor
Ph.D., University of Pennsylvania
Greek art and architecture

†Erickson, Gerald, Professor
Ph.D., University of Minnesota
Language pedagogy, social history

Hershbell, Jackson, Professor
Ph.D., Harvard University
Greek literature, philosophy, intellectual history

Keuls, Eva, Professor
Ph.D., Columbia University
Greek literature, fine arts, social history

Krevans, Nita, Associate Professor
D.Phil., Princeton University
Hellenistic and Roman literature

Malandra, William, Associate Professor
Ph.D., University of Pennsylvania
Indo-Iranian philology, history of religions

McNally, Sheila, Professor
Ph.D., Harvard University
Greek and Roman art and archaeology

Nicholson, Oliver, Assistant Professor
D.Phil., Oxford University
Latin antiquity, medieval Latin, early Byzantine studies

Paradise, Jonathan, Associate Professor
Ph.D., University of Pennsylvania
Ancient Mesopotamia, legal text, Hebrew lexicography

Reisman, Daniel, Associate Professor
Th.D., University of Pennsylvania
Sumerian, Akkadian, Aramaic

Sellew, Philip Harl, Associate Professor
Th.D., Harvard University
New Testament, early church, Greek and Roman religions

Sheets, George, Associate Professor
Ph.D., Duke University
Roman literature, linguistics, law

Sonkowsky, Robert, Professor
Ph.D., University of North Carolina
Classical and medieval Latin literature, oral performance, theater, rhetoric

Zahavy, Tzvee, Professor
Ph.D., Brown University
History of Judaism, late antiquity

Communication Disorders

Broen, Patricia, Professor
Ph.D., University of Minnesota
Language acquisition, phonological development

Carlstrom, Jane, Associate Clinical Specialist
M.A., University of Iowa
Clinical audiology

Davis, Julia, Professor and Dean
Ph.D., University of Southern Mississippi
Rehabilitative audiology

Doyle, Shirley, Associate Clinical Specialist
M.A., University of Maryland
Language disorders

Haroldson, Samuel, Associate Professor
M.A., University of Minnesota
Stuttering, laryngectomy

Hinderscheit, Linda, Associate Clinical Specialist
M.A., University of Minnesota
Language disorders, severely handicapped populations

Liss, Julie, Assistant Professor
Ph.D., University of Wisconsin
Motor speech disorders

Margolis, Robert, Adjunct Professor
Ph.D., University of Iowa
Auditory evoked potentials, middle ear functions

Moller, Karlind, Adjunct Professor
Ph.D., University of Minnesota
Craniofacial anomalies

Nelson, David, Adjunct Professor
Ph.D., University of Minnesota
Electrically-stimulated hearing, otoacoustic emissions

Reichle, Joe, Professor
Ph.D., University of Wisconsin
Language disorders, severely handicapped populations

Schlauch, Robert, Assistant Professor
Ph.D., University of Washington
Diagnostic audiology, hearing measurement, cognitive influences on hearing

*Siegel, Gerald, Professor
Ph.D., University of Iowa
Language development, sign language

*Speaks, Charles, Professor
Ph.D., University of Michigan
Speech perception

Starr, Clark, Professor
Ph.D., Northwestern University
Cleft palate, voice disorders

Stemberger, Joseph, Associate Professor
Ph.D., University of California, San Diego
Psycholinguistics, phonetics, phonology, morphology

van Deusen, Diana, Assistant Clinical Specialist
M.A., University of Iowa
Clinical audiology, aural rehabilitation

*Van Tasell, Dianne, Professor
Ph.D., Northwestern University
Effects of hearing loss on audition, hearing aids

Viemeister, Neal, Adjunct Professor
Ph.D., Indiana University
Auditory perception, psychophysics

Ward, W. Dixon, Professor
Ph.D., Harvard University
Psychoacoustics

Windsor, Jennifer, Assistant Professor
Ph.D., Purdue University
Language acquisition and disorders

Comparative Literature

Armstrong, Nancy, Professor
Ph.D., University of Wisconsin
History of narrative, feminist theory, the novel, cultural criticism

Canning, Peter, Assistant Professor
Ph.D., Harvard University
Fields of modern European literature, philosophy, psychoanalysis

Chow, Rey, Associate Professor
Ph.D., Stanford University
Contemporary critical theory, East-West comparative studies in modern literature

Administration and Faculty

Jha, Prabhakara, Assistant Professor
Ph.D., University of California, Davis
Post-colonial literatures, cultural studies, modern Indian writing (Hindi and Bengali), colonial discourse and critical theory

Sarles, Harvey, Professor
Ph.D., University of Chicago
Anthropological theory, comparative thought, semiotics of the body, study of America

East Asian Studies

Decker, Margaret, Assistant Professor
Ph.D., Stanford University
Chinese language and contemporary fiction

Jacobsen, Wesley, Associate Professor
Ph.D., University of Chicago
Japanese linguistics

Liu, Chun Jo, Professor
Ph.D., University of Wisconsin
Chinese language and literature

Monnet, Livia, Assistant Professor
Ph.D., University Vienna
Japanese contemporary literature; feminist perspectives

Szatrowski, Polly, Assistant Professor
Ph.D., Cornell University
Japanese language and linguistics

Wang, Stephen, Professor
Ph.D., University of Washington
Chinese language and linguistics

Economics

Allen, Beth, Professor
Ph.D., University of California, Berkeley
Mathematical economics, economics of information

Altug, Sumru, Assistant Professor
Ph.D., Carnegie-Mellon University
Macroeconomics, econometrics, time series analysis, business cycle theory, capital theory

Chipman, John S., Regents' Professor
Ph.D., Johns Hopkins University
Econometrics, international trade, microeconomic theory, measurement of economic welfare

Coen, Edward, Professor Emeritus
Ph.D., London School of Economics
Welfare economics, international economics

Feldman, Roger D., Professor
Ph.D., University of Rochester
Health economics, labor economics, human capital and human resources

Foster, Edward, Professor
Ph.D., Massachusetts Institute of Technology
Public finance, microeconomic theory

Geweke, John, Professor
Ph.D., University of Minnesota
Econometrics, macroeconomics, dynamic models, forecasting

Green, Edward J., Professor
Ph.D., Carnegie-Mellon University
Microeconomics, mathematical economics, industrial organization

Hildreth, Clifford, Professor Emeritus
Ph.D., Iowa State University
Mathematical economics, decision under uncertainty

Hurwicz, Leonid, Regents' Professor Emeritus
LL.M., Warsaw University
Mathematical economics, economic organization, welfare economics, social choice

Ichimura, Hidehiko, Assistant Professor
Ph.D., Massachusetts Institute of Technology
Econometrics, public finance, single index models, nonparametric estimators, portfolio selection

Jordan, James, Professor
Ph.D., Northwestern University
Mathematical economics, general equilibrium under uncertainty, economics of information dynamics

Keane, Michael, Assistant Professor
Ph.D., Brown University
Labor economics, macroeconomics, applied econometrics

Kehoe, Patrick, Associate Professor
Ph.D., Harvard University
International trade and finance, game theory, dynamic policy games

Kehoe, Timothy, Professor
Ph.D., Yale University
General equilibrium theory, public finance

Kiyotaki, Nobuhiro, Associate Professor
Ph.D., Harvard University
Macroeconomics, monetary theory

Marimon, Ramon, Assistant Professor
Ph.D., Northwestern University
Microeconomics, macroeconomics, mathematical economics, game theory, stochastic growth theory

Merlo, Antonio, Assistant Professor
Ph.D., New York University
Public finance, applied econometrics

McLennan, Andrew, Associate Professor
Ph.D., Princeton University
Game theory, mathematical economics, microeconomics

Mohring, Herbert, Professor
Ph.D., Massachusetts Institute of Technology
Industrial organization and antitrust, urban economics, resource economics

Prescott, Edward C., Professor
Ph.D., Carnegie-Mellon University
Industrial organization, macroeconomics, organization theory, aggregate fluctuations and growth

Richter, Marcel K., Professor
Ph.D., Massachusetts Institute of Technology
Mathematical economics, rational choice theory, general equilibrium theory

Rogerson, Richard, Associate Professor
Ph.D., University of Minnesota
Macroeconomics, labor economics

Ruttan, Vernon, Regents' Professor
Ph.D., University of Chicago
Economics of agricultural development, technical change

Sahi, Simran, Director of Undergraduate Programs
Ph.D., University of Pittsburgh
International trade and finance

Smith, Harlan, Professor Emeritus
Ph.D., University of Chicago
Economic philosophy, economic problems, world order studies

Swan, Craig, Professor
Ph.D., Yale University
Macroeconomics, econometrics, money and banking, housing policy, mortgage markets

Thompson, T. Scott, Assistant Professor
Ph.D., University of Wisconsin, Madison
Econometrics, microeconomics, nonlinear models, discrete choice models

*Turnbull, John G., Professor Emeritus
Ph.D., Massachusetts Institute of Technology
Labor economics, collective bargaining, economic security

Wallace, Neil, Professor
Ph.D., University of Chicago
Monetary theory, macroeconomics, international finance, regulation of financial intermediaries

Werner, Jan, Assistant Professor
Ph.D., University of Bonn, West Germany
Microeconomic theory, mathematical economics, general equilibrium under uncertainty, financial markets

English

*Anderson, Chester, Professor
Ph.D., Columbia University
Modern literatures in English, Irish literature

*Anson, Christopher, Associate Professor
Ph.D., Indiana University
Theory and research of writing, writing across the curriculum

Bales, Kent, Professor
Ph.D., University of California, Berkeley
American literature, romanticism, literature and the other arts

†Bridwell-Bowles, Lillian, Associate Professor
Ed.D., University of Georgia
Composition research and theory, language development

†Brown, Robert, Associate Professor
Ph.D., University of Michigan
Linguistics, writing theory, teaching writing

*Browne, Michael Dennis, Professor
M.F.A., University of Iowa
Creative writing, modern and contemporary poetry and poetics

Burns, Alan, Professor
Law, Inn's of Court, London
Fiction writing, contemporary novel in United States and United Kingdom

*†Clayton, Thomas, Chair of Classical Civilization Program and Professor
Ph.D., Oxford University
Shakespeare, 17th-century English literature, literary theory and criticism

Copeland, Rita, Associate Professor
Ph.D., University of California, Berkeley
Medieval studies

Damon, Maria, Assistant Professor
Ph.D., Stanford University
Modern poetry, poetics

Elfenbein, Andrew, Assistant Professor
Ph.D., Yale University
Romanticism, Victorian literature, intertextuality and influence, gender

Escure, Genevieve, Professor
Ph.D., Indiana University
Sociolinguistics, language universals, linguistic theory, phonology, syntax

Firchow, Peter, Professor
Ph.D., University of Wisconsin
Modern British and American literature, comparative literature, literature and society, Utopian literature

Fitzgerald, Maria, Associate Professor
M.A., York University
Fiction writing, contemporary fiction

Fruman, Norman, Professor
Ph.D., New York University
The Romantics, 19th century, literary criticism

Furia, Philip, Professor
Ph.D., University of Iowa
Modern poetry, American literature, literature and the arts

†Garner, Shirley, Professor
Ph.D., Stanford University
Renaissance literature, 16th-century poetry, Shakespeare, autobiography, feminist criticism

Administration and Faculty

*Geffen, Arthur, Associate Professor
Ph.D., University of Chicago
American literature, drama, folklore

*Griffin, Edward, Professor
Ph.D., Stanford University
American literature and American studies, use of early
American history and literature by modern American
writers, American religion, teaching

Haley, David, Associate Professor
Ph.D., Harvard University
Literature of 1500-1700, history, philosophy

*Hampl, Patricia, Professor
M.F.A., University of Iowa
Creative writing, autobiographical and memoiristic
writing, contemporary American poetry and fiction

Hancher, Michael, Professor
Ph.D., Yale University
Theory of meaning and interpretation, history of literary
criticism, speech-act theory

Hirsch, Gordon, Professor
Ph.D., University of California, Berkeley
Victorian literature, the English novel, psychological
approaches to literature, critical theory

Hoy, Hellen, Associate Professor
Ph.D., University of Toronto
Canadian women writers, Canadian literature, women
writers, Victorian literature

JanMohammed, Abdul, Associate Professor
Ph.D., Brandeis University
Afro-American fiction, colonialist literature and culture,
post-colonial anglophone literature

*†Kendall, Calvin, Professor
Ph.D., University of California, Berkeley
Old English literature (especially Beowulf), Middle
English literature (especially Chaucer), medieval Latin

†Leyasmeyer, Archibald, Director of Program for
Individualized Learning and Associate Professor
Ph.D., Princeton University
Drama (especially modern), 18th-century literature,
verbal and visual satire

Luke, David, Assistant Professor
Ph.D., State University of New York
Romantic literature (especially Keats), Victorian
literature (especially Arnold)

MacLeish, Andrew, Professor
Ph.D., University of Wisconsin
English language and linguistics, history of the English
language, Middle English language and literature,
linguistics and literature

*†McNaron, Toni, Professor
Ph.D., University of Wisconsin
Shakespeare, Virginia Woolf, Emily Dickinson, lesbian
poetry, feminist criticism, feminist pedagogy, Milton

Messer-Davidow, Ellen, Associate Professor
Ph.D., University of Cincinnati
Literary and cultural theory; feminist studies; 18th-
century literature; academic knowledge-production

Miner, Valerie, Associate Professor
M.J., University of California
Fiction writing, contemporary fiction

Mowitt, John, Associate Professor
Ph.D., University of Wisconsin
Literary theory and cultural criticism, cultural history of
modernity, the cinematic and literary engendering of
subjectivity

Przybylowicz, Donna, Associate Professor
Ph.D., Brandeis University
American and English novel, contemporary critical
theory

Rabinowitz, Paula, Assistant Professor
Ph.D., University of Michigan, Ann Arbor
20th-century American writers, women and minority
writers, U.S. literary radicalism, Marxist and feminist
criticism

*Reed, Peter, Professor and Associate Dean
Ph.D., University of Washington
20th-century British novel (especially 1930-present),
20th-century British poetry and drama

Ross, Donald, Director of University College and
Professor
Ph.D., University of Michigan
The American "Renaissance," theory of the novel, role
of computers and word processors in writing instruction

Roth, Marty, Professor
Ph.D., University of Chicago
19th-century American fiction, romantic fiction, popular
culture, narrative theory

Solotaroff, Robert, Professor
Ph.D., University of Chicago
American literature, theory of fiction, modernism

Sprengnether, Madelon, Professor
Ph.D., Yale University
Feminist criticism, Renaissance literature (especially
Shakespeare), women writers, creative writing

Stekert, Ellen, Professor
Ph.D., University of Pennsylvania
Aesthetics of oral literatures, relationships between oral
and written literatures, collecting folk tradition
(fieldwork)

Sugnet, Charles, Associate Professor
Ph.D., University of Virginia
Shakespeare, the novel, feminist criticism, American
nature writing, the Romantic period

Wallace, David, Professor
Ph.D., St. Edmund's College, University of Cambridge
Medieval studies

Weinsheimer, Joel, Professor
Ph.D., Ohio University
Late 18th-century literature (especially Samuel Johnson and Jane Austen), literary theory

*Wright, George, Regents' Professor
Ph.D., University of California
Poetry, Shakespeare, modern British literature (especially Yeats, Eliot, Auden, Joyce), versification, poetic style

French and Italian

Akehurst, F.R.P., Professor
Ph.D., University of Colorado
Old French language, law, and literature

Barnes, Betsy, Associate Professor
Ph.D., Indiana University
French linguistics, applied linguistics, pragmatics

Brewer, Daniel, Associate Professor
Ph.D., The Johns Hopkins University
18th-century literature

Brewer, Mária, Associate Professor
Ph.D., Yale University
20th-century narrative, theater

Conley, Tom, Professor
Ph.D., University of Wisconsin
Renaissance literature, cinema

Martinez, Ronald, Associate Professor
Ph.D., University of California, Santa Cruz
Dante, Renaissance

Noakes, Susan, Professor and Associate Dean
Ph.D., Yale University
Poetics, French and Italian Renaissance literature, women's studies

Paganini, Maria, Professor
Ph.D., Zurich University, Switzerland
20th-century novel

Preckshot, Judith, Associate Professor
Ph.D., University of California, Irvine
20th-century literature

Robinson, Peter, Associate Professor
Ph.D., University of Pennsylvania
19th-century poetry

Schneider, Marilyn, Professor
Ph.D., University of Wisconsin
Modern Italian literature, literary analysis

Sivert, Eileen, Associate Professor
Ph.D., University of California, Riverside
19th-century prose, feminism, narratology

Waldauer, Joseph, Professor
Ph.D., Columbia University
18th-century narrative and theater

Wieland, Molly, Assistant Professor
Ph.D., Indiana University
Sociolinguistics, discourse analysis

Geography

Adams, John, S., Professor
Ph.D., University of Minnesota
American cities, regional analysis

Barrett, Ward, Professor
Ph.D., University of California, Berkeley
Middle America, Oceania, historical geography

Borchert, John, Regents' Professor Emeritus
Ph.D., University of Wisconsin
Metropolitan and regional land use planning

Brown, Dwight, Professor
Ph.D., University of Kansas
Physical geography, cartography, paleoenvironments, water resources, geographic information systems

*Gersmehl, Philip, Professor
Ph.D., University of Georgia
Physical geography, education, North America, geographic information systems

Hart, John, Professor
Ph.D., Northwestern University
Regional geography, North America

Hsu, Mei Ling, Professor
Ph.D., University of Wisconsin
East Asia, cartography (design and automation)

Klink, Katherine, Assistant Professor
Ph.D., University of Delaware
Climate-biosphere interaction, climate dynamics, quantitative methods

Leitner, Helga, Associate Professor
Ph.D., University of Vienna
Urban and regional development, international labor migration, Europe

Lukermann, Fred, Professor
M.A., University of Minnesota
Historical-geographical thought

McMaster, Robert B., Associate Professor
Ph.D., University of Kansas
Cartography, geographic information systems

Martin, Judith A., Associate Professor
Ph.D., University of Minnesota
Urban planning, environmental perception

Mather, Eugene, Professor Emeritus
Ph.D., University of Wisconsin
Rural settlement of the Americas

Miller, Roger, Associate Professor
Ph.D., University of California, Berkeley
Urban and historical geography, geographical methodology and theory

Administration and Faculty

Porter, Philip, Professor
Ph.D., University of London
Cartography, Africa, tropical agrichlimatology,
development

Rice, John, Professor
Fil. lic., University of Uppsala
Historical geography, Europe (especially the Scandina-
vian states and Finland)

Samatar, Abdi, Assistant Professor
Ph.D., University of California, Berkeley
Third World development and regional planning; East
Africa

Schwartzberg, Joseph, Professor
Ph.D., University of Wisconsin
South and Southeast Asia, political geography, historical
cartography

Scott, Earl, Professor
Ph.D., University of Michigan
Cultural and economic geography, Africa

Sheppard, Eric, Professor
Ph.D., University of Toronto
Economic geography, political economy, quantitative
methods, philosophical foundations of geography

Skaggs, Richard, Professor
Ph.D., University of Kansas
Climatology, physical geography, long-term temperature
trends, drought

Squires, Roderick, Associate Professor
Ph.D., University of Durham, England
Biohistorical geography, public land policy.

†Weil, Connie, Associate Professor
Ph.D., Columbia University
Medical geography, Latin America

German

Duroche, Leonard, Associate Professor
Ph.D., Stanford University
Men's studies, literary theory, phenomenology, literary
space, children's literature, Romanticism

Firchow, Evelyn Scherabon, Professor
Ph.D., Harvard University
Germanic philology and medieval German literature

Fullerton, Gerald Lee, Associate Professor
Ph.D., University of Michigan
German and Germanic linguistics

Hirschbach, Frank, Professor Emeritus
Ph.D., Yale University
20th-century literature, GDR area studies and literature

Joeres, Ruth-Ellen Boetcher, Professor
Ph.D., Johns Hopkins University
18th- and 19th-century literature, women's history and
literature

Lieberman, Anatoly, Professor
Dr.Phil., University of Leningrad
General linguistics, Germanic philology, folklore, poetic
translation

McCormick, Richard, Associate Professor
Ph.D., University of California, Berkeley
Film studies, 20th-century literature and theory,
feminism

Schulte-Sasse, Jochen, Professor
Dr.Phil., Ruhr-Universitaet, Bochum, Germany
Literature from 1700-1820, 1885-present, theory of
literature, popular literature

Taraba, Wolfgang, Professor
Dr.Phil., Westfaelische-Wilhelms-Universitaet Muenster
18th- and 19th-century literature, lyric poetry, novella

Teraoka, Arlene, Associate Professor
Ph.D., Stanford University
20th-century, GDR, and minority literature; German
intellectual history

Wakefield, Ray, Associate Professor
Ph.D., Indiana University
Second-language acquisition, medieval literature, Dutch

†Weiss, Gerhard, Professor
Ph.D., University of Wisconsin, Madison
17th-, 19th-, and 20th-century literature, German studies

Zipes, Jack, Professor
Ph.D., Columbia University
Fairy tales, 20th-century literature; German, GDR,
women's, and Jewish studies

History

Altholz, Josef, Professor
Ph.D., Columbia University
Modern English history, religious history of modern
Europe

Bachrach, Bernard, Professor
Ph.D., University of California, Berkeley
Medieval Europe before 1200

Berman, Hyman, Professor
Ph.D., Columbia University
American labor and radicalism, 20th century, Minnesota
history

Brauer, Kinley, Professor
Ph.D., University of California, Berkeley
U.S. diplomatic history

Brooks, Jeffrey, Associate Professor
Ph.D., Stanford University
Russian and Soviet history, history of popular culture

Evans, John, Professor
Ph.D., McMaster University, Canada
Roman history

Evans, Sara, Professor
Ph.D., University of North Carolina, Chapel Hill
American women's history, family history, social movements

Farah, Caesar, Professor
Ph.D., Princeton University
Middle Eastern history and cultures

†Farmer, Edward, Professor
Ph.D., Harvard University
Modern Chinese history, comparative early modern history

Good, David F., Professor
Ph.D., University of Pennsylvania
European economic history, Hapsburg Empire

†Green, George, Associate Professor
Ph.D., Stanford University
American economic and business history, historiography, historical methods

Hanawalt, Barbara, Professor
Ph.D., University of Michigan
Medieval English social history

Howe, John, Professor
Ph.D., Yale University
18th- and 19th-century American political history

*Isaacman, Allen, Professor
Ph.D., University of Wisconsin
Africa, comparative history

Kelly, Thomas, Professor
Ph.D., University of Illinois
Ancient Greece

†Kieft, David, Associate Professor
Ph.D., University of California, Berkeley
European diplomatic history, German history

Kopf, David, Professor
Ph.D., University of Chicago
South and Southeast Asian cultural and comparative history of world and West

*Lehmberg, Stanford, Professor
Ph.D., Cambridge University
Tudor-Stuart England

Marshall, Byron K., Professor
Ph.D., Stanford University
Asian history, 19th- and 20th-century intellectual and social Japanese history

Maynes, Mary Jo, Professor
Ph.D., University of Michigan
European social history, history of the family, women, education, Germany, France

McCaa, Robert, Associate Professor
Ph.D., University of California, Los Angeles
Modern Latin America, demographic history, quantitative methods

Menard, Russell, Professor
Ph.D., University of Iowa
Early American history

*Metcalf, Michael, Professor
Ph.D., University of Stockholm
Early modern Scandinavian history, modern Scandinavian history

*Munholland, Kim, Professor
Ph.D., Princeton University
Late 19th- and 20th-century French social and political history, French imperialism

*Murphy, Paul, Professor
Ph.D., University of California, Berkeley
American constitutional and legal history, civil liberties and civil rights

**†Noble, David, Professor
Ph.D., University of Wisconsin, Madison
American intellectual history, historiography, progressivism

Noonan, Thomas, Professor
Ph.D., Indiana University, Bloomington
Early Russian history, archaeology and numismatics, early Russian relations with Islam and the Vikings

Norling, Lisa, Assistant Professor
Ph.D., Rutgers University
American social and cultural history

O'Brien, Jean M., Assistant Professor
Ph.D., University of Chicago
Indians of the Northeast (17th and 18th centuries)

Phillips, Carla, Professor
Ph.D., New York University
European economy and society 1450-1750, Spain 1492-present

Phillips, William, Professor
Ph.D., New York University
Medieval Europe and early modern European history, history of Spain, slavery and European expansion

Pomata, Gianna, Professor
Ph.D., University of Florence, Italy
European cultural history

Reyerson, Kathryn, Professor
Ph.D., Yale University, Doctorat D'Etat Montpellier
Law School
Medieval social and economic history, medieval France, medieval legal history

Rudolph, Richard, Professor
Ph.D., University of Wisconsin
European social and economic history, Russia, Eastern Europe

Ruggles, Steven, Associate Professor
Ph.D., University of Pennsylvania
Historical demography, history of the family, U.S. social history

Administration and Faculty

*Samaha, Joel, Professor
Ph.D., Northwestern University
Criminal justice history, criminal law and criminal procedure

†Schwartz, Stuart, Professor
Ph.D., Columbia University
Colonial Latin America, Brazil, social history

Spear, Allan, Associate Professor
Ph.D., Yale University
20th-century U.S. history

*Stavrou, Theofanis, Professor
Ph.D., Indiana University
Russian history

Taylor, Romeyn, Professor
Ph.D., University of Chicago
History of Chinese society, late imperial Chinese history

Thayer, John, Professor
Ph.D., University of Wisconsin
Modern European political-cultural history, history of historiography and method

Tracy, James, Professor
Ph.D., Princeton University
Early modern Europe, 16th century, the low countries

Valdés, Dennis, Associate Professor
Ph.D., University of Michigan
Chicano history, labor history, Mexico

Vecoli, Rudolph, Professor
Ph.D., University of Wisconsin, Madison
History of American immigration, ethnicity and pluralism

Waltner, Ann, Associate Professor
Ph.D., University of California, Berkeley
Traditional Chinese social history, religion, gender, fiction, ritual and law

White, Luise, Assistant Professor
Ph.D., Cambridge University
Modern African history

Wright, William, Professor
Ph.D., University of Colorado
Austrian history

Humanities

Archer, W. John, Associate Professor
Ph.D., Harvard University
History of city and suburban design, architecture and landscape

Kliger, George, Assistant Professor
Ph.D., University of Minnesota
Modern European philosophy, psychology, literature, art, pre-Muslim culture of India

†Leppert, Richard, Professor
Ph.D., Indiana University
Musicology; art history; cultural studies, 17th-20th centuries

Lincoln, Bruce, Professor
Ph.D., University of Chicago
Sociopolitical dimensions of myth and ritual; mythic/ritual dimensions of society and politics

Mowitt, John, Associate Professor
Ph.D., University of Wisconsin
Cultural theory and literary criticism, film and popular music

Tapp, Robert, Professor
Ph.D., University of Southern California
Philosophy of religion; religions, social sciences and modern culture

Thomas, Gary, Assistant Professor
Ph.D., Harvard University
Cultural studies, musical-literary relations, 17th-19th centuries, gay studies

International Relations

Knudson, Barbara, Professor
Ph.D., University of Minnesota
Women in development, international development

Journalism and Mass Communication

Babcock, William, Associate Professor
Ph.D., Southern Illinois University
News-editorial, international communication, media criticism

Busterna, John, Associate Professor
Ph.D., University of Wisconsin, Madison
Advertising, media economics

Chang, Tsan-Kuo, Assistant Professor
Ph.D., University of Texas at Austin
International communication, news-editorial

Dicken-Garcia, Hazel, Professor
Ph.D., University of Wisconsin, Madison
Mass communication history

Faber, Ronald, Associate Professor
Ph.D., University of Wisconsin, Madison
Consumer socialization, political advertising, compulsive consumption

Fang, Irving, Professor
Ph.D., University of California, Los Angeles
Broadcast journalism, history of mass communication

Gillmor, Donald, Professor
Ph.D., University of Minnesota
Media law and regulation, media and society

Griffin, Michael, Assistant Professor
Ph.D., University of Pennsylvania
Mass media studies (media, culture and society), television, film and TV news, history of visual media

Hansen, Kathleen, Associate Professor
M.A., University of Wisconsin, Madison
Information strategies, access and technologies for mass communication

Johnson, Leola, Assistant Professor
Ph.D., University of Minnesota
News-editorial, minorities and communication

Lee, Chin Chuan, Professor
Ph.D., University of Michigan
International mass communication, theory and methodology

Roberts, Nancy, Associate Professor
Ph.D., University of Minnesota
Communication history, magazine writing

Schwartz, Dona, Associate Professor
Ph.D., University of Pennsylvania
Visual media studies, field research methods, documentary

Soley, Lawrence, Professor
Ph.D., Michigan State University
Advertising media, quantitative methods, propaganda and persuasion

Tichenor, Phillip, Professor
Ph.D., Stanford University
Theory and methodology, science journalism, public opinion

Tims, Albert, Associate Professor
Ph.D., University of Wisconsin, Madison
Communication theory, research methods, advertising media

Wackman, Daniel, Professor, Director
Ph.D., University of Wisconsin, Madison
Media management, advertising, research methods

*†Ward, Jean, Professor
Ph.D., University of Minnesota
Mass media as social institutions, news editorial

Wells, William, Professor
Ph.D., Stanford University
Advertising, persuasion, research methods

Linguistics, General and Applied

Cohen, Andrew, Associate Professor
Ph.D., Stanford University
Applied linguistics, second language acquisition

Downing, Bruce, Associate Professor
Ph.D., University of Texas
Syntax, English linguistics, bilingualism

Gundel, Jeanette, Professor
Ph.D., University of Texas
Syntax, semantics, pragmatics, discourse analysis, language processing

Houlihan, Kathleen, Professor
Ph.D., University of Texas
Phonology, phonetics, Hispanic linguistics

Hutchinson, Larry, Associate Professor
Ph.D., Indiana University
Syntax, computational and mathematical linguistics, history and philosophy of linguistics

Kac, Michael, Professor
Ph.D., University of California, Los Angeles
Syntax, semantics, computational linguistics, foundations of linguistics

Miranda, Rocky, Associate Professor
Ph.D., Cornell University
Historical linguistics, Indo-European and South Asian linguistics

Sanders, Gerald, Professor
Ph.D., Indiana University
Syntax, language typology, writing systems

Sheldon, Amy, Associate Professor
Ph.D., University of Texas
First- and second-language acquisition, psycholinguistics, language and gender, applied linguistics

Stenson, Nancy, Associate Professor
Ph.D., University of California, San Diego
Syntax, Irish and Celtic languages, American Indian languages, applied linguistics

*Tarone, Elaine, Professor
Ph.D., University of Washington
Applied linguistics, second-language acquisition

Music

Anderson, John, Professor
Ed.D., Columbia University
Woodwind area coordinator, clarinet, pedagogy and literature, woodwind ensembles

Argento, Dominick, Regents' Professor
Ph.D., Eastman School of Music
Composition, orchestration

Artymiw, Lydia, Associate Professor
B.A., Philadelphia College of Performing Arts
Piano

Ashworth, Thomas, Assistant Professor
Ph.D., North Texas State University
Low brass

Baldwin, David, Professor
D.M.A., Yale University
Brass area coordinator, trumpet, trumpet pedagogy, transcription for winds

Bencriscutto, Frank, Professor Emeritus
D.M.A., Eastman School of Music
Director of bands, composition, arranging

Billmeyer, Dean, Associate Professor
D.M.A., Eastman School of Music
Organ, literature and pedagogy, church music, advanced keyboard harmony

Administration and Faculty

Borg, Robert, Associate Professor
Ph.D., State University of Iowa
Music education

Braginsky, Alex, Professor
D.M.A. (equiv), Moscow Conservatory
Piano, chamber music

Cherlin, Michael, Associate Professor
Ph.D., Yale University
Music theory

Damschroder, David, Associate Professor
Ph.D., Yale University
Tonal theory and analysis, history of music theory

Freed, Paul, Professor
M.M., Florida State University
Piano, piano literature

Furman, Charles, Associate Professor
Ph.D., Florida State University
Music therapy, music education, psychology of music

Garrett, Margo, Professor
Ethel Hitchcock Endowed Chair in Accompanying and Coaching
M.M., Manhattan School of Music
Accompanying and coaching

Grayson, David, Associate Professor
Ph.D., Harvard University
Historical musicology, 19th-20th centuries, Debussy studies

Haack, Paul, Professor
Ph.D., University of Wisconsin
Music education

Hepokoski, James, Professor
Ph.D., Harvard University
Historical musicology, 19th century, Verdi

Herzberg, Jean, Assistant Professor
M.M., Indiana University
Voice (soprano), vocal literature

Jackson, Donna, Professor
Ph.D., Harvard University
Historical musicology, medieval and Renaissance

Kagan, Alan, Associate Professor
Ph.D., Indiana University
Ethnomusicology, China, Asia; American fiddle; videodocumentation

Kim, Young Nam, Associate Professor
M.M., Syracuse University
Violin, chamber music, string orchestra

Lancaster, Thomas, Professor
D.M.A., Indiana University
Choral music, choral conducting, techniques and literature

Lubet, Alex, Associate Professor
Ph.D., University of Iowa
Composition, 20th-century theory, theory pedagogy

Maurice, Glenda, Professor
M.M., Manhattan School of Music
Voice (mezzo-soprano), vocal literature

†McClary, Susan, Professor
Ph.D., Harvard University
Systematic musicology, critical theory, historical musicology, Baroque music and performance

McCoy, Claire, Associate Professor
Ph.D., University of Iowa
Music education, movement-based methods

McCurdy, Ronald, Associate Professor
Ph.D., University of Kansas
Jazz studies

McNab, Duncan, Associate Professor
D.M.A., University of California, Los Angeles
Piano, piano literature

Remenikova, Tanya, Professor
D.M.A. (equiv), Moscow Conservatory
Cello, cello pedagogy, string techniques, chamber ensembles

Schultz, Stephen, Associate Professor
Ph.D., Northwestern University
Music education

Shockley, Rebecca, Associate Professor
D.M.A., University of Colorado
Piano, class piano, pedagogy, piano ensembles

Sidlin, Murry, Associate Professor
M.M., Peabody Conservatory of Music
Orchestral conducting

†Sutton, Everett, Professor
Ph.D., University of Minnesota
Opera theater/workshop, history of opera

Ultan, Lloyd, Professor
Ph.D., University of Iowa
Composition, electronic/computer music

Vamos, Almita, Professor
M.A., Western Illinois University
Violin, Suzuki, chamber music

Vamos, Roland, Professor
D.M.A., Juilliard School
Viola, violin, chamber music, conducting

Ware, D. Clifton, Associate Professor
D.M., Northwestern University
Voice (tenor), pedagogy

Weller, Lawrence, Associate Professor
M.M., University of Illinois
Voice (baritone), choral music, diction

Zaimont, Judith, Professor
M.A., Columbia University
Composition, theory

Philosophy

*Anderson, C. Anthony, Professor
Ph.D., University of California, Los Angeles
Logic, formal semantics, philosophy of language

Bowie, Norman E., Professor
Ph.D., University of Rochester
Political philosophy, corporate responsibility, ethics

Caplan, Arthur, Professor
Ph.D., Columbia University
Medical ethics, history and philosophy of science

Dahl, Norman, Professor
Ph.D., University of California, Berkeley
Moral philosophy, ancient philosophy

†Dolan, John M., Associate Professor
Ph.D., Stanford University
Philosophy of language, epistemology, medical ethics

Eaton, Marcia M., Professor
Ph.D., Stanford University
Aesthetics

Giere, Ronald, Professor
Ph.D., Cornell University
Philosophy of science

Gunderson, Keith, Professor
Ph.D., Princeton University
Philosophy of mind, aesthetics

Hanson, William, Professor
Ph.D., Yale University
Logic, philosophy of logic

Hellman, Geoffrey, Professor
Ph.D., Harvard University
Philosophy of natural science, philosophy of mathematics and logic, aesthetics

Hopkins, Jasper, Professor
Ph.D., Harvard University
Ancient and medieval philosophy, philosophy of religion

Lewis, Douglas, Professor
Ph.D., University of Iowa
17th- and 18th-century philosophy, metaphysics

Mason, H. E., Professor
Ph.D., Harvard University
Moral and political philosophy, philosophy of language

Owens, Joseph, Associate Professor
Ph.D., University of California, Los Angeles
Philosophy of mind, language, metaphysics

*Peterson, Sandra, Associate Professor
Ph.D., Princeton University
Ancient philosophy, moral philosophy

*Root, Michael, Associate Professor
Ph.D., University of Illinois
Philosophy of language, philosophy of social science

Savage, C. Wade, Professor
Ph.D., Cornell University
Philosophy of science, epistemology, philosophy of psychology

Scheman, Naomi, Professor
Ph.D., Harvard University
Feminist theory, philosophy of mind, theory of criticism

Wallace, John, Professor
Ph.D., Stanford University
Philosophy of language

Waters, C. Kenneth, Assistant Professor
Ph.D., Indiana University
Philosophy of Science, epistemology, philosophy of biology

Political Science

Backstrom, Charles, Professor
Ph.D., University of Wisconsin
Parties and elections, state and local politics

Ball, Terence, Professor
Ph.D., University of California, Berkeley
European and American political theory, analytical political philosophy

Benjamin, Roger, Professor
Ph.D., Washington University
Comparative politics, political development

Davidheiser, Evelyn, Assistant Professor
Ph.D., Duke University
Comparative politics, Soviet Union

*Dietz, Mary, Associate Professor
Ph.D., University of California, Berkeley
Development of political thought

Disch, Lisa, Assistant Professor
Ph.D., Rutgers University
Political theory

*†Duvall, Raymond, Professor
Ph.D., Northwestern University
International relations, comparative political economy

Farr, James, Professor
Ph.D., University of Minnesota
Political theory

Flanigan, William, Professor
Ph.D., Yale University
Political behavior

Fogelman, Edwin, Professor
Ph.D., Princeton University
Political theory

*†Freeman, John, Professor
Ph.D., University of Minnesota
Political economy, methodology

Gray, Virginia, Professor
Ph.D., Washington University
American public policy, comparative state politics

Administration and Faculty

Holt, Robert, Professor
Ph.D., Princeton University
Comparative political systems

Hopkins, Anne, Vice President for Arts, Sciences, and
Engineering, and Professor
Ph.D., Syracuse University
State politics

Jacobs, Lawrence, Assistant Professor
Ph.D., Columbia University
American public policy

Kelliher, Daniel, Assistant Professor
Ph.D., Yale University
Comparative politics, China

Krislov, Samuel, Professor
Ph.D., Princeton University
Judicial behavior

Kvavik, Robert, Assistant Vice President, International
Education, and Associate Professor
Ph.D., Stanford University
Political organizations, Scandinavia

Legro, Jeffrey W., Instructor
Ph.D., University of California-Los Angeles (expected
1992)
International relations, comparative politics

McGuire, Kevin, Assistant Professor
Ph.D., Ohio State University
Judicial process

Moore, Nina, Teaching Specialist
Ph.D., University of Chicago (expected 1993)
American government, ethnic politics

Nimtz, August, Associate Professor
Ph.D., Indiana University
Africa, comparative, community politics

Oren, Ido, Assistant Professor
Ph.D., University of Chicago
International relations

Richards, Diana, Assistant Professor
Ph.D., Yale University
Methodology, international relations

†Sampson, Martin, Associate Professor
Ph.D., Indiana University
International relations, foreign policy

Scott, Thomas, Director, Center for Urban and Regional
Affairs, and Professor
Ph.D., Northwestern University
Urban government and politics

†Shively, W. Phillips, Professor
Ph.D., University of North Carolina
Comparative politics, Western Europe

Sikkink, Kathryn, Assistant Professor
Ph.D., Columbia University
Comparative politics, Latin America

Smith, Steven, Professor
Ph.D., University of Minnesota
Legislative and executive process

Sorauf, Frank, Regents' Professor
Ph.D., University of Wisconsin
Political parties, judicial process

Sullivan, John, Professor
Ph.D., University of North Carolina
Methodology, political psychology

Sylvan, David, Associate Professor
Ph.D., Yale University
International relations

Psychology

Ackerman, Phillip, Associate Professor
Ph.D., University of Illinois, Urbana-Champaign
Ability measurement, human factors, individual
differences in learning

Berscheid, Ellen, Regents' Professor
Ph.D., University of Minnesota
Interpersonal attraction, close relationships, emotion,
social perception and cognition

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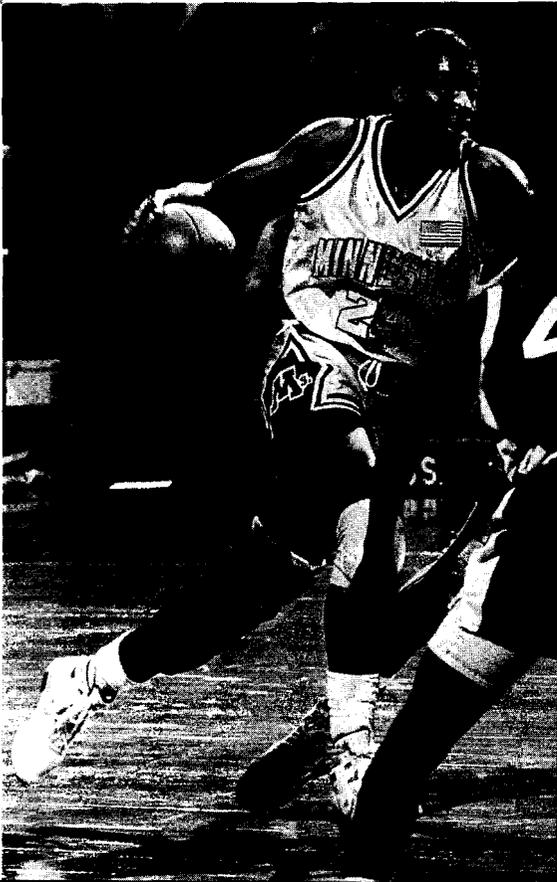
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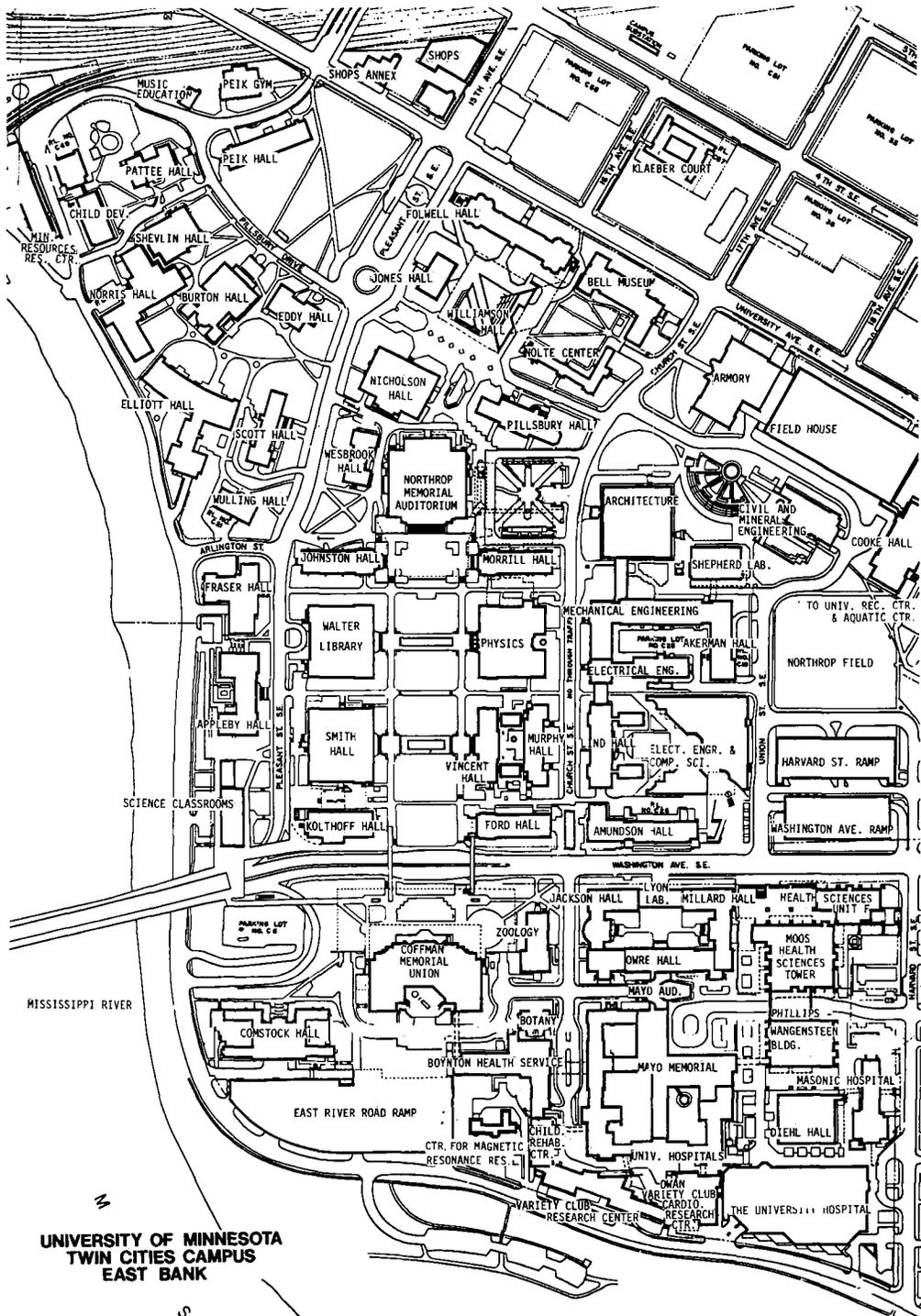
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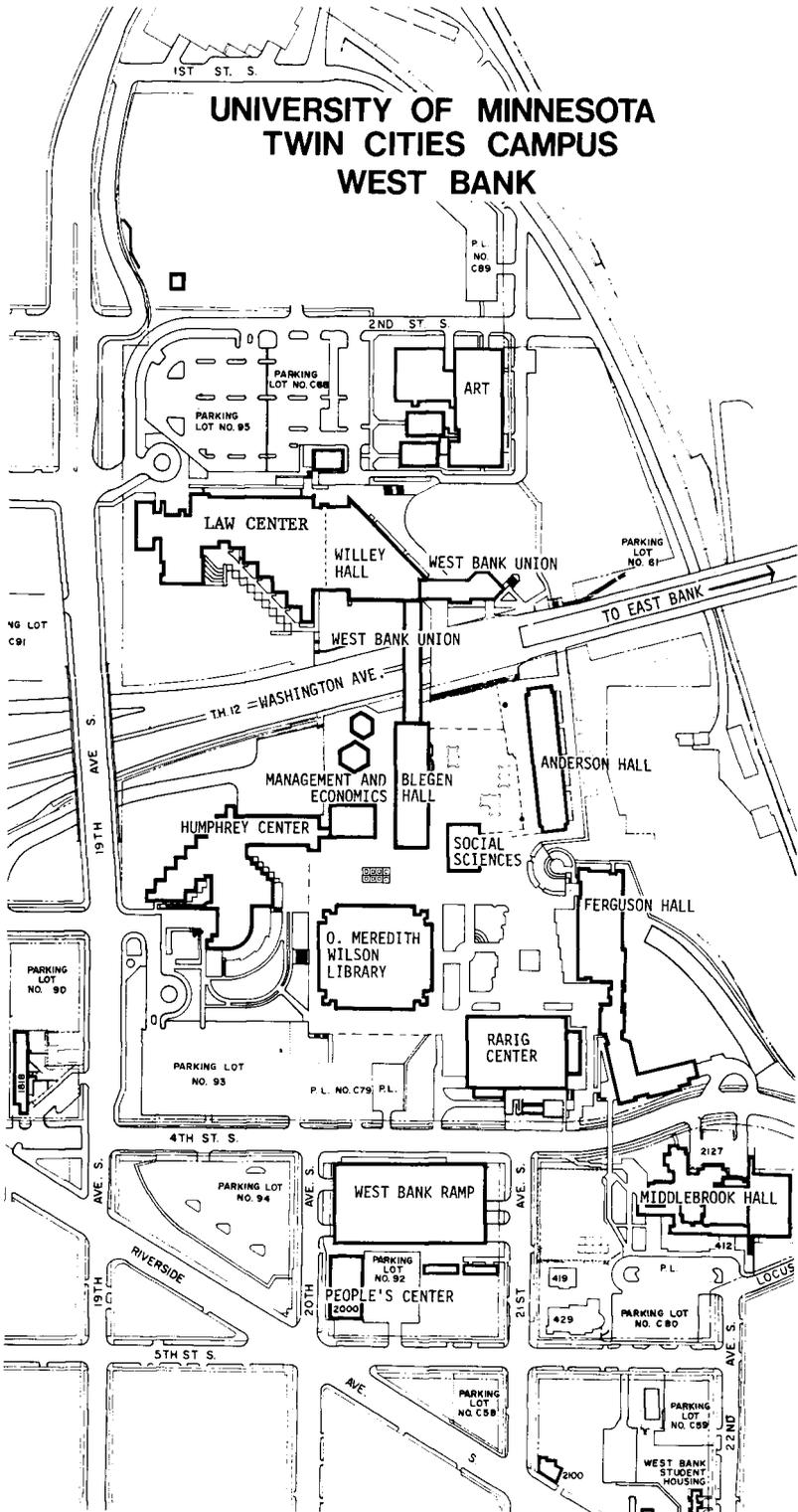
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