

Liberal Arts University of Minnesota Bulletin 1986-88



Liberal Arts

The College and Its Procedures	5
Major Requirements and Course Descriptions	31
CLA Preparation for Degree Work in Other Colleges	261
Group Distribution, World Studies, Cultural Pluralism, and Route II Course Lists	273
Administration and Faculty	281
Index	295
Campus Maps	300

Introduction

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 at the information center in Williamson Hall. D.I.A.L. tapes, available by calling 624-6575, offer recorded messages describing a number of CLA services and programs.

Advising Services—Every CLA student is assigned to a specific adviser—a staff or faculty member who helps 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, religion, color, sex, national origin, handicap, age, veteran status, or sexual orientation. In adhering to this policy, the University abides by the requirements of Title IX of the Education Amendments of 1972; by Sections 503 and 504 of the Rehabilitation Act of 1973; by Executive Order 11246, as amended: 38 U.S.C. 2012; by the Vietnam Era Veterans Readjustment Assistance Act of 1972, as amended; and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be addressed to Patricia A. Mullen, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, University of Minnesota, 100 Church Street S.E., Minneapolis, MN 55455 (612/624-9547); to the Director of the Office of Civil Rights, Department of Education, Washington, DC 20202; or to the Director of the Office of Federal Contract Compliance Programs, Department of Labor, Washington, DC 20210.

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

Some student information—name, address, telephone number, dates of enrollment and enrollment termination, college and class, major, adviser, academic awards and honors received, and degrees earned—is considered public or directory information. While in attendance at the University, students may prevent the release of public information by notifying the records office of their campus.

Students are notified annually of their right to review their educational records. The regents' policy, including a directory of student records, is available for review

at the Williamson Hall Information Center, Minneapolis, and at records offices on other campuses of the University. Questions may be directed to the Office of Registration, Student Records, and Scheduling, 150 Williamson Hall (612/625-5333).

Postal Statement

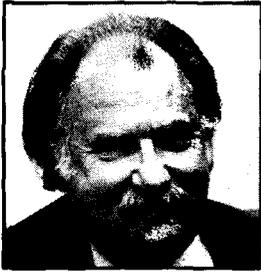
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Photography

Letter from the Dean



Welcome to the College of Liberal Arts. Most students who enter the University of Minnesota, no matter what their ultimate objective, begin their education in this college. Liberal arts is the heart of every university and central to the whole educational enterprise. It develops the conceptual abilities and analytical skills you need in a society that requires both perspective and flexibility.

Liberal education comes before professional, technological, and vocational training. It prepares you for citizenship, it teaches you to ask the right questions, and it explores the values and moral issues in society.

You have selected the College of Liberal Arts in a major, international university. Its size and reputation offer you a breadth of subjects and an outstanding faculty drawn from around the world. Several of our departments rank among the top 10 in the United States. You can select more than 60 majors, or you can design an individualized program. The faculty and advisers can help you plan an exciting academic career.

The first section of this bulletin outlines the liberal arts requirements. It also gives you the basic information about services we offer as you move through CLA: the Honors Program for those students who excel academically; the Martin Luther King Program which tutors and counsels students with financial or educational needs; the Office of Special Learning Opportunities which directs you to field learning or internship experiences and can facilitate individualized study programs; the Foreign Study Office which can help you plan for study abroad; the

Career Development Office which teaches resume writing, interviewing techniques, and arranges job interviews.

Once you are familiar with the available resources, the college is yours. This is a big institution, but not an impersonal one. You will find faculty and staff who want to help you chart your own course. We judge ourselves by what we can do for you while you are enrolled in the college.

Cordially,

A handwritten signature in dark ink, appearing to read "Fred E. Lukermann". The signature is fluid and cursive.

Fred E. Lukermann
Professor and Dean

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 that encompasses 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.

More than 16,000 undergraduate students and 1,800 graduate students were enrolled in CLA programs in fall 1985. The college is staffed by nearly 490 permanent faculty members who can share the most current research in their fields.

Many students complete their education in the college. Others complete their basic liberal arts course work in the college and transfer to another unit of the University such as the School of Management or one of the health science schools.

As the port of entry to the University for most students, the college 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 this college 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 group distribution requirements will introduce you to modes of inquiry and subject matter characteristic of the major

branches of knowledge. In a rededication to the importance of communication and the ability to write, the composition requirement was divided a few years ago 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 revised 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, be required to 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 four-year 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.). A two-year degree, associate in liberal arts (A.L.A.), is awarded only by petition. The four-year 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 are generally free to select the major and minor of your choice. Some programs limit the number of majors admitted (the B.F.A., computer science, journalism, music, political science, and speech-communication; biology, management, education, and some health science 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 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, and composition and theory.

Associate in Liberal Arts Degree—The A.L.A. degree is no longer offered as a regular degree of the college. You should see a Scholastic Committee representative in 114 Johnston Hall for information regarding eligibility.

CLA Degrees Earned Concurrently With Other University of Minnesota Degrees—If you transfer to the School of Management, College of Education, or 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 get majors or minors in CLA without completing the distribution or other requirements for a CLA degree.

Degree Requirements

Group Distribution Requirements

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

Though many students spread group distribution course choices over their four 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 two years of work more fruitful, and many group distribution courses are prerequisite to 3xxx- and 5xxx-level required and elective courses.

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

The College and Its Procedures

B.A. and B.S. Degrees—Candidates must fulfill the following group distribution 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)

Group B—The Physical and Biological Universe

12 to 15 credits (three 4- or 5-credit courses, one to include a laboratory. Two of the courses must be chosen from the list of foundation courses listed in the last section of this bulletin, either as one two-quarter sequence in a particular science or as two one-quarter courses in different sciences.)

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.I.S. Degree—Candidates must fulfill the following group distribution requirements (at least 52 credits):

Group A—12 to 15 credits (normally three courses); either 12 to 15 credits of a single second language, ancient or modern, or 12 to 15 credits in group A courses, at least one of which must deal with a formal language or formal symbolic system

Groups B, C, and D—Same as B.A. and B.S. requirements

B.F.A. and B.M. Degrees—Candidates must fulfill the following group distribution 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 28

Group D—Requirement automatically satisfied by major field

A.L.A. Degree—The A.L.A. degree is conferred only by petition. The right to petition for the degree requires the completion of 90 credits acceptable to CLA. You should see a Scholastic Committee representative in 114 Johnston Hall for information regarding eligibility.

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 and has strengthened the college graduation requirement for most students. A new second language requirement for B.A., B.I.S., and B.F.A. degrees goes into effect fall 1986 for new students and students transferring into the college with fewer than 39 credits. In fall 1988, all new students will follow the "1986 Second Language Requirement" listed below. Students who entered before fall 1986 or who transfer into the college before fall 1988 with 39 credits or more may follow Route I or Route II of the "Former Second Language Requirement" listed below.

Knowledge of a second language gained before entering CLA may be used to meet part or all of either of the language requirements. If you are unsure about your level of proficiency, you may consult a language department or an advisor 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, of course, 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 requirement by passing examinations arranged with appropriate

departments. See Examination-for-Credit Programs and your language department.

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.

1986 Second Language Requirement—*Graduation requirement.* The graduation requirement for the B.A. and B.F.A. degrees requires students to demonstrate proficiency usually attained after the first six quarters of college study in one language.

The graduation requirement for the B.I.S. degree requires students to demonstrate proficiency equal to the college's entrance standard for a second language.

Entrance standard. Students who wish to study the most commonly taught languages—French, German, and Spanish—must meet a second-language entrance standard, demonstrating the proficiency usually attained after the first three quarters of college study (usually three to four years in high school). The standard will be phased into operation by requiring one quarter proficiency for freshmen and transfer students with fewer than 39 credits entering the college fall 1986, two quarter proficiency for fall 1987, and three quarter proficiency for fall 1988 and beyond.

Proficiency tests to determine appropriate placement or fulfillment of the entrance standard and graduation requirement will be given several times during the year. Students should contact their language department for testing information.

Students who meet the entrance standard may continue their study at higher levels in the same language, or may begin study in another language. Students who do not meet the standard and register in beginning French, German, or Spanish will receive credit for beginning courses, but the credit will not apply toward graduation. Students who do not meet the standard have the option

to register in a language other than French, German, or Spanish, and the credit will count toward graduation.

Former Second Language Requirement—The graduation requirement for the B.A. degree requires students to fulfill the second language requirement by one of two "routes." Route I is designed to train you to use with proficiency a language different from your native tongue; Route II reduces the emphasis on language but requires supplementary study of the civilization and culture in which the chosen language is the principal medium of communication.

Route I requires completion of the equivalent of at least 23 credits in a second language, high school and college work combined, or passage of a proficiency examination at that level. Route II requires completion of the equivalent of at least 27 credits, at least 15 in a second language or proficiency at that level and 12 in courses about the country or countries that use the language chosen.

Route I and Route II requirements, with a list of courses that meet part of the Route II requirements, are listed in the last section of this bulletin.

World Studies Requirement

In order for students to expand 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, or 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

In order to acquire a greater appreciation for cultural diversity in the United States, B.A. and B.I.S. degree students who start their college work fall 1986 or

The College and Its Procedures

later are required to complete at least two courses (8 to 10 credits) dealing with Afro-American, American Indian, Asian American, and Chicano cultures, and the concepts of race and ethnicity, ethnocentrism and racism, and other significant social factors in these cultures. 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 meet the English composition requirement. If you began college course work before fall 1982 and have not completed the composition requirement in effect at that time, you should discuss course selection with an adviser in your college office. If you enrolled after to that time, you satisfy the requirement through a writing practice course and a 3xxx-level composition course related to your major. The composition requirement is explained in detail under English Composition in the Major Requirements and Course Descriptions section.

Major Requirements

Major Sequences—Candidates for all CLA degrees must complete a major to gain depth of understanding in an area of study. More than 50 major sequences are offered in the college; the second section of this bulletin describes them. Requirements change from time to time. Check with your adviser, your college office, or your department office for current information (ask for an up-to-date major requirements sheet).

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 take 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 at 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 30 3xxx and 5xxx credits outside the major.

Admission to major status in eight CLA degree programs requires departmental permission: biology, computer science, journalism and mass communication, music, the B.M., political science, speech communication, and the B.F.A. If you are interested in one of these programs, you should consult the appropriate department office.

Established Interdepartmental Majors—These majors are offered in African studies, American studies, classical civilization, East Asian studies, humanities, international relations, Jewish studies, Latin American studies, Middle Eastern and South Asian studies, religious studies, Russian and East European studies, theological study preparation, urban studies, and women's studies. Requirements are detailed under appropriate headings in the second section. These majors may be modified in individual cases.

Individually Designed Interdepartmental Major—This major allows you to design a unique program based on an interdisciplinary theme or concentration 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 course work 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 do not have a major and need not be confined to a single area of concentration, the program must have a coherence based on stated academic objectives. The distribution requirements, which differ from those for other CLA degrees, are listed earlier under the heading Degree Requirements. The B.I.S. 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 B.A. and B.S. candidates and to degree candidates in other colleges who wish to complete an area of concentration outside their major. No more than 20% of the minor credits may be taken on an S-N basis or earned through directed study, directed instruction, or independent study. Minors are listed in the second section.

General Credit Requirements

Credit Requirements—A minimum of 180 credits acceptable to the college are required for all CLA bachelor's degrees; 75 of these credits must be in 3xxx and 5xxx courses. 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, at least 30 of which must be taken in the senior year. "CLA credits" are credits earned in courses listed in the second section of this bulletin and taken

through registration on the Twin Cities campus.

Credits earned by examination and credits for courses not listed in this bulletin (non-CLA courses) may not be applied toward the required 45 CLA credits. A maximum of 16 approved non-CLA credits, however, may be applied toward the overall credit requirements (except for the B.I.S., which permits 40 such credits if approved by the adviser). Credits from typing, word processing, shorthand, study skills, first aid, and courses clearly remedial or vocational in nature may not be applied toward credit requirements.

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

Outside-of-Major Requirement—B.A. programs must include at least 30 3xxx-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.

Other Graduation Guidelines

Degree Requirements After an Absence—If you have not attended CLA for *more than two years*, and have completed fewer than 75 credits, you must fulfill the graduation requirements in effect at the time you reenter. 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.

If you have not attended CLA for *two years or less*, you are under the requirements applicable to you before your absence.

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 (75 after admission to program)
CLA CREDITS	45 in CLA courses, at least 30 in the senior year				
3XXX OR 5XXX CREDITS	Minimum of 75 30 outside the major	Minimum of 75	Usually minimum of 75	Minimum of 75, 15 outside the major	Minimum of 75
QUALITY STANDARDS	Grades of A, B, C, or S in 180 CLA credits, in 75 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 quality standards requirement. Credits of D earned at Minnesota or other institutions after summer 1972 count toward all other requirements.				
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				
ENGLISH COMPOSITION	Two composition courses, one in the freshman year and one 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 equal to the college's entrance standard for second language
GROUP DISTRIBUTION	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 52 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 9 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				

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 belonging to minority or other groups that have been underrepresented in the college. The College of Liberal Arts is committed to providing equal opportunity to all 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 (624-4110). CLA advisers will answer your questions, provide information, and arrange meetings with faculty members for you. The Department of University Relations (624-6868) schedules campus tours. Please call two weeks in advance if possible.

Application Procedure

The College of Liberal Arts admits qualified applicants at all undergraduate levels. Admission depends upon your prior educational achievement and objectives and your state of residence (if you are *not* from Minnesota, North Dakota, South Dakota, or Wisconsin, you must satisfy higher academic standards).

Admission materials and information can be requested by mail, by phone, or in person from the Office of Admissions, 240 Williamson Hall, University of Minnesota, 231 Pillsbury Drive S.E., Minneapolis, MN 55455 (625-2008). A \$20 nonrefundable application fee, payable to the University of Minnesota, must accompany your admission application.

You may begin college work in any quarter. As a new student, you may register during the summer session and earn credits toward a degree, but you are not formally admitted to the college until a later quarter.

You should apply for admission as early as possible. High School students should apply for admission between October and January of their senior year. The priority deadline for completed fall quarter applications is February 1. The priority deadline for nonresident and international freshman applications is April 1. Students who wish to transfer from another college or university, including another college or campus of the University of Minnesota, should apply for admission between January and March; the priority deadline for transfer applications is April 1. Adult and high school special applicants must submit completed applications by September 1. There is no guarantee of admission to students who apply after the priority deadline, but the college will continue to receive applications and admit students if space is available. The deadline for winter quarter applications is November 15; for spring quarter, February 15.

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 instructions are in the *Summer Session Bulletin* available by April 1; you may register in advance beginning in May.

Freshman Admission

High school graduates who have completed less than one year of college work (fewer than 39 quarter credits) enter as freshmen. Those in the top 10% of their high school graduating classes are automatically admissible. Others are considered for admission on the basis of high school percentile rank and scores on a college aptitude test.

Applicants seeking admission as freshmen must submit scores from either the Preliminary Scholastic Aptitude Test/National Merit Scholarship Qualifying Test (PSAT/NMSQT), the American College Testing Program (ACT), or the Scholastic Aptitude Test of the College

Board (SAT). The PSAT, administered through the Minnesota Statewide Testing Program, is taken during the junior year of high school; the ACT during the junior or senior year; the SAT during 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 rank plus either PSAT, ACT, or SAT scores determine admissibility. Patterns of high school work and educational objectives are also considered. Students who do not meet all of the basic requirements may be admitted if their record suggests the likelihood of successful college work.

Advanced Placement—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.

Admission Before High School Graduation

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

High School Special Program—High school juniors and seniors with strong academic records may take up to two University courses each quarter in addition to their high school classes. For an admission application, contact the Office of Advanced High School Services, 337 Nolte, 315 Pillsbury Drive S.E., Minneapolis, MN 55455 (626-1666).

Early Full 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.

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.

Advanced Standing/Transfer Admission

If you have completed a year or more of college work (39 or more quarter credits), you are considered for admission with advanced standing. Admissibility is usually based on your earlier college performance (better than a C average is required), educational objectives, and patterns of course work completed. Students who have received an associate degree from a Minnesota community college will usually be admitted if they have grades of C or better in at least 20 transferable courses (84 transferable credits).

If you are a prospective advanced standing student, you would be wise to include in your pre-CLA work as many prerequisite and preparatory courses as possible for the area you expect to enter.

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 college-

level courses in disciplines outside the liberal arts (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 made in the Office of Admissions, 240 Williamson Hall (625-2008). Address questions to this office.

Honors Program Admission

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. Pre-major 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 (624-5522).

Martin Luther King Program Admission

For admission to the Martin Luther King Program, you must be admitted to CLA through the regular application procedures described for new freshmen or new advanced standing students. You should

indicate interest in the MLK Program on your application form. Certification for applying to the University and the MLK Program can be obtained through the MLK office and the various ethnic learning resource centers of the Office of Minority and Special Student Affairs.

Eligibility for the MLK Program is not based solely on certification. If you are currently enrolled or a returning student, information regarding application procedures and eligibility can be obtained either from the MLK Program, 19 Johnston Hall (625-9898), or from the Office of Minority and Special Student Affairs, University of Minnesota, Room 310, 1901 University Avenue S.E., Minneapolis, MN 55414.

Nondegree Status— Adult Special Admission

If you are interested in enrolling in CLA courses but not in earning a CLA degree, you may qualify for adult special status in the college. Hundreds of men and women study for reasons of personal growth and enrichment through adult special registration. Usually adult special students already hold bachelor's degrees or have been out of high school for seven or more years. Flexible admission standards take into account the needs and experiences of individual students.

If you have begun a degree program at another college, it is generally more appropriate to apply for regular rather than adult special admission, unless you plan to return to your original college within a year's time. It is not appropriate to apply for adult special status if your objective is to improve your scholastic average in order to meet CLA's regular admission standards for degree-seeking students.

Advising services for CLA adult special students are available in the Adult Special office in 114 Johnston Hall (624-4545). Advisers aid in planning programs to suit students' outside demands and in selecting course work 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

The College and Its Procedures

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.

Applications should be received by September 1 for fall quarter admission, November 15 for winter quarter admission, and February 15 for spring quarter admission.

Applications for adult special admission for non-CLA graduates are made to the Office of Admissions, 240 Williamson Hall, University of Minnesota, 231 Pillsbury Drive S.E., Minneapolis, MN 55455.

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 (625-2020).

Orientation

New students are required to participate in a one- or two-day CLA orientation program scheduled before the first quarter of enrollment. Planned in conjunction with the University Orientation office, special programs are offered to introduce you to the resources and services of the University and college. College advisers will also meet with you in groups and individually to work out initial registration, explain degree requirements, and answer questions.

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, you should use this information to do some preparation. You might consider various majors that interest you and identify your goals

for the first quarter. When you come to campus, you also will receive a *CLA Student Handbook*, which contains details about registration, course selection, transfer of credits, and college services; this handbook is to be used in conjunction with the *CLA Bulletin* as preparation for academic study.

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, for spring classes in mid-February, 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. You should take care not to enroll in courses for which you are not prepared or that would involve repetition of work already completed. The course descriptions list prerequisites; instructors will also discuss requisite preparation with you. Transfer students and students taking non-CLA courses should be especially careful not to take courses which may repeat previous course work. Course listings in the second section cross index most equivalent CLA courses, but may not indicate other University of Minnesota courses which may duplicate CLA courses. An instructor may ask you to cancel a course if you are inadequately prepared or inappropriately registered.

If you determine that you are enrolled in a course inappropriate for you, you should cancel the course as quickly as possible. Course cancellations are allowed through 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 freshmen and transfer students from other institutions, receive registration information by mail. You will be given other materials and instructions when you come to campus for the required orientation-registration program. *Students from other University of Minnesota colleges* apply for authorization to change colleges at the Admissions office, 240 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. *Students returning to CLA after absences*, if they have not attended a college outside the University, obtain registration information at 214 Johnston Hall; returning CLA students who have attended school outside the University go to Admissions, 240 Williamson Hall. *Continuing students* should receive registration information on their Registration Status Notice every quarter, or they may call the CLA Student Information office at 625-2020 or their college advising office to find out where to obtain materials. Distribution begins four days before registration periods open.

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 (625-5333).

Limits on Registration

Minimum/Maximum Credit Loads—Normally you are expected to register for at least 12 credits per quarter. When circumstances make a lighter registration advisable, you may register for fewer than 12 credits. (Students receiving financial aid should check minimum credit requirements.) Most students register for three or four courses a quarter—12 to 16 credits. Enrollment for more than 19 credits requires Student Scholastic Standing Committee approval. This limit means that typically you may register for four courses on your own but must gain approval for five. Exceptions may be granted if you have a superior academic record.

Non-CLA Credits—Courses described in the second section of this bulletin carry CLA credit as indicated. You may enroll in some courses offered by other University of Minnesota colleges—courses not listed in this bulletin—however, a maximum of 16 credits of approved non-CLA courses may be applied toward a CLA bachelor's degree. Non-CLA credit may not be used to meet group distribution requirements. To find out if a non-CLA course is approved for CLA credit, check with your 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 although 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 may also repeat for credit any course from which you have officially withdrawn.

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.

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 in a second language, consult your adviser or the language department about appropriate course selection. You may repeat high school language studies for credit under either A-F or S-N grading.

Second language credit may be earned through special examination if your level of knowledge is beyond that of your previous formal study or if your competence has been gained through informal study.

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 course 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.

Continuing Education and Extension—If you are considering enrollment in evening courses or extension TV 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.

To have extension courses entered on your day school transcript, you must make a special request in 150 Williamson Hall.

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 or change your grade option through the first 10 days of the quarter to make adjustments in your program. Course cancellations may be made through the first six weeks of a quarter.

You are held responsible for completing courses for which you have registered unless you officially cancel them.

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

Limits on Cancel-Adding—Course cancellations are allowed only during the first six weeks of a quarter. Course entry after the first five days requires written permission from the instructor, and after the first 10 days from the instructor and Student Scholastic Standing Committee. Entry is seldom permitted beyond the 10th day. For this reason, a cancellation after 10 days likely will result in a reduced schedule.

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 cancelling the original registration and adding the registration under the new grade base. Change of grade base cancellations are permitted only through the first 10 days of each quarter.

Late Cancellation Policy—Cancellation after the first six weeks of a quarter is rarely granted and only with Student Scholastic Standing Committee approval. Late cancellations may be granted only for unforeseen extenuating circumstances that arise after the sixth week deadline and that can be verified in writing.

Financial Aid and Course Cancellation—If you cancel your entire registration during a quarter, or cancel a course or courses causing your registration to fall below the level for which you are receiving financial aid (12 credits for full-time student status), you will be required to repay the Office of Student Financial Aid. Veterans receiving GI benefits must repay the Veterans Administration. Repayment is calculated according to the date on which your cancellation is effective. Consult the Student Financial Aid office, 210 Fraser Hall (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 requires no permission if done through study day (or the day before study day if study day falls on a Saturday). You should notify your college office, complete a course cancellation request, and submit it in 202 Fraser Hall.

Advising

College advising services offer individual help in planning your study program and in meeting other concerns of college life. Freshmen and sophomores who have not selected majors and students in special programs go to assigned premajor or other advising centers (a directory appears be-

low) for assistance with course selection, registration, vocational and personal decisions, financial problems, and participation in campus activities. After you choose a major and attain sophomore standing, you are assigned for program guidance to a staff member in your major department; you usually retain the same adviser until graduation. College records move to the appropriate upper division office, which becomes your college office.

Wise use of the advising system can make your college experience more satisfying and productive. You should take pertinent records and materials to adviser appointments, and you can profit by preparing for program planning sessions by giving some careful thought to possible course selections or program schedules.

CLA Advising Offices

Your college records are kept in the advising office to which you are assigned; these offices provide advising services and procedural information. The offices are:

Premajor Advising (for freshmen, pre-professional students, and those who have not declared majors)

105 Johnston Hall (625-0514)—coordinator for premajor advising

30 Johnston Hall (624-9006)—health sciences, mathematics, biological and physical science majors; students in health sciences and science/technology areas who have not declared majors

B-18 Johnston Hall (624-9585)—social sciences, humanities, and fine arts majors, preprofessional students (e.g., management, education); students in liberal arts/preprofessional areas who have not declared majors

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

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

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

Advising for Special Programs

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

Honors Program—115 Johnston Hall
(624-5522)

Martin Luther King Program—19
Johnston Hall (625-9898)

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 (626-0348).

Special Learning Opportunities

Honors Opportunities

(115 Johnston Hall, 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.

Honors Courses—Honors courses or special honors sections of regular courses are often small in size and taught by selected teachers. Though 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 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. 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, 625-9898)

In addition to providing academic advising and personal counseling, the Martin Luther King Program offers a variety of supportive services—tutorials, MLK sections of introductory courses, support groups, study skills workshops, and employment counseling. The program is designed for students interested in maximizing their potential for education; they need not be members of an ethnic or racial minority. The major goal is to provide support to students as they make progress toward degrees. Information about entering the program is described under Admission in this section.

The MLK office provides an atmosphere where students can feel comfortable in obtaining help and information. The counseling and academic staff provide individualized services designed to encourage students to realize their potential.

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 departmental major. Since you must carefully plan your own 80-credit major, the IDIM program may require more initiative, thought, and effort from you than do many traditional majors, but it offers in exchange an individualized education and close contact with faculty and staff advisers. Information about the IDIM program is presented in the second section or can be obtained in 220 Johnston Hall (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. This degree program has features that are especially appropriate to a returning student whose interests have changed. 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 course work outside the college, provided it is relevant to your objectives and approved by your advisers. The distribution requirements are also somewhat different. You must have earned at least 39 credits before applying and must complete 75 credits in the program. Further information is available in 220 Johnston Hall (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 (624-7577). Special learning opportunities include examinations for credit, independent study, field experience learning, and domestic exchange programs. They are described below.

Independent Study

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 member of the faculty, 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 tak-

ing, 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.

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 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 Office for Special Learning Opportunities.

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 Programs

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 78 public colleges, located in 37 states, Puerto Rico, and the Virgin Islands. 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 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 departmental 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. Only currently enrolled students are eligible.

Credit by special examination is not granted for language below the fourth year courses taken in high school.

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.

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 course work previously completed in the subject matter will be subtracted from credit awards for CLEP exams. 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-B-C-D-F and S-N. Most CLA courses may be taken under either system. Choice of grading system is indicated on registration forms; changes may not be made after the 10th day of classes. Some courses may be taken under only one system; limitations are identified in the course listings. Most departments restrict S-N 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 grade point average.
- N—*No credit*. Prior to 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 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 is often difficult to obtain redefinition of S grades in A-B-C-D terms. If you are contemplating professional or gradu-

ate work, you should consult college bulletins or an adviser about use of S-N grading.

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 distribution requirements, prerequisites, or, with departmental approval, specific course requirements for the major. D credits in General College composition courses may not be used to satisfy the CLA composition requirement.

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

- I — *Incomplete*, a temporary grade assigned when the instructor has "reasonable expectation" that you can successfully complete unfinished work in a course before the end of the next quarter. You and your instructor should arrive at a clear understanding, in advance, about whether you will receive an I and what the conditions for makeup of work will be. The instructor may set dates and conditions for makeup of work.

When you are assigned an I, you are expected to make up the work on your own. You may not attend the class sessions in a subsequent quarter without reregistering.

If a course is not completed as prescribed or not made up as agreed within one calendar year, the I becomes a continuing entry on the transcript. After one year, neither the department nor the instructor is obligated to accept or evaluate work submitted for completion of the course.

To make up an I that has been on your transcript for more than a year, you are usually expected to reregister for the course and to complete it as if it were an original registration. The original I will remain on your transcript. Depart-

ments or instructors may extend the one-year limit in cases in which makeup without registration seems feasible.

- W — *Official withdrawal* from a course after the 10th day of classes (earlier withdrawals are not recorded). You must file a course cancellation request prior to the sixth week of classes to assure that the W, rather than an F, will be formally entered on your record.
- V — Registration as a *visitor* or auditor, which permits attendance and, with instructor permission, participation in a course's activities. No credit or grade is earned. 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 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 or N or symbols of I or W were awarded. Grades of F are included in credits attempted and are used in computing the grade point average.

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 or your adviser is recommended.

Satisfactory progress according to CLA standards differs from standards imposed by the Office of Student Financial Aid. The financial aid office requires that students funded for full-time study complete satisfactorily at least 36 credits in an academic year.

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. A notation also appears on the transcripts of the CLA students (about 8%) who "make" the list. 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.

Old Grade and Credit Requirements—Credits and grades earned before fall 1972 will be accepted toward graduation under the rules in effect when they were earned. Specifically, all credits completed before fall 1972 count toward graduation; and a grade average of C in such credits—overall, in major courses, and in 3xxx or 5xxx courses—is necessary to apply them toward a CLA degree. Information about these requirements may be obtained from your college office.

Student Grade Reports and Transcripts

Student academic records are maintained by the Office of Registration, Student Records, and Scheduling through a computerized system. These records show all course work 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 \$6 or an unofficial copy at no charge at the transcript service in the Office of Registration, Student Records, and Scheduling,

155 Williamson Hall. Also, official certified transcripts will be sent upon your written request, at a charge of \$2 per copy, 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 grade slips 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 and summer grades are mailed separately.

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

Retention of Student Records—Official transcripts are maintained permanently by the Office of Registration, Student Records, and Scheduling. The college retains CLA degree program plans filed by students who have earned 75 or more credits. It also keeps student records 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 make up of work for absences. Instructors and students may consult the Student Scholastic Standing Committee about the validity of such policies or decisions.

Course Performance and Grading—Instructors establish their own ground rules for their courses 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 avail-

able. 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 should also 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 exam schedule adjustment in your college office. Instructors are obligated to schedule make-up exams within the final examination period for students who have three final exams within a 16-hour period. Instructors also are encouraged to reschedule exams for students with religious objections to taking an exam 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 625-2020.

If you miss a final, an I, F, or N is recorded, depending upon your standing in the class. The instructor's permission to make up the examination must be obtained.

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 re-

quest, 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 grade point average. You are expected to complete 75% of each year's credits with grades of A, B, C, or S. The formula for determining this is:

$$\frac{\text{Credits graded A, B, C, S}}{\text{Credits graded A, B, C, S, D, F, N, I}} = 75\%$$

This percentage applies to credits for which you were registered after the 10th day of classes each quarter.

If you fail to attain the required completion percentage, you will be put on probation—the signal that your academic progress has not been satisfactory. If you do not meet the probation terms, you will be suspended from the college. If you have fallen well below the 75% standard, you may be required to complete all of your next quarter's courses with grades of A, B, C or S to avoid suspension. The college attempts to notify students put on probation, 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 indicated.

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. Since continuance in the college in

this circumstance is not likely to serve a useful purpose, you may be suspended. The Student Scholastic Standing Committee decides in each case, on the basis of all the evidence, whether to suspend a student. Appeals may be brought 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 that led to the suspension have been corrected, together with convincing prospects that improved work will follow, must be advanced to obtain approval. Reaccepted students are usually placed on probation, and may be subject to immediate suspension if work becomes unsatisfactory.

Petitions for readmission are normally granted only after an interval of one year.

Student Intermediary Board (101 Johnston Hall, 626-0348)

Student participation in and communication about CLA affairs are channeled through the Student Intermediary Board (SIB), a council of elected and appointed undergraduates.

The board is the official channel through which recommendations from the CLA student body are brought to the college. The board also nominates undergraduate student representatives to many CLA councils and committees. These governing councils and committees deal with all aspects of CLA policy.

An additional SIB responsibility is to maintain contact with departmental student organizations. These bodies function in many CLA departments as the board does within the college.

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

Student Services

Scholastic Standing

The Student Scholastic Standing Committee, made up of faculty members, students, and administrators, 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 your 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. Adjustments are possible in many circumstances. Well-established petition and appeal procedures assure full review of your requests.

Scholastic Conduct

The college has defined scholastic dishonesty broadly as any act that violates the rights of another student in academic work or that involves 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 paper, or substantially similar papers, 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

members, investigates charges of academic dishonesty referred to it by CLA faculty members. When charges are upheld, the student may be placed on disciplinary probation, failed in a course, or suspended from the college.

CLA faculty members 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. The secretary for the conduct committee can provide specific information on report and appeal procedures (114 Johnston Hall, 624-4545).

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 (624-6073).

Grievance Procedures and Appeals

If you have complaints or criticism about the content or conduct of a course, you have recourse through well-established 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 informal processes fail to reach a satisfactory resolution, the department's committee on academic freedom and responsibility will be assembled to hear the evidence. 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 can often suggest suitable alternatives when a problem is involved.

Other sources of assistance include the Student Ombudsman 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, 624-1665)

Student financial aid is provided in the form of grants, loans, scholarships, and employment. Major sources of aid include Pell Grants; Minnesota State Scholarships and Grants; National Direct Student Loans; Supplemental Educational Opportunity Grants; University scholarships, grants, and loans; employment; College Work-Study; health professions funds; Guaranteed Student Loans; Auxiliary Loans to Assist Students; and Parent Loans for Undergraduate Students.

You should apply as soon as possible after January 1, the winter prior to the fall term in which you wish to receive 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. Applicants should complete the American College Testing Family Financial Statement and the OSFA Data Form to apply for most types of aid, including Guaranteed Student Loans. To receive current information, obtain application materials from the Office of Student Financial Aid.

OSFA also provides small, short-term loans to students who face acute emergencies.

Part-time work, either on or off campus, is available through the Student Employment Center, 120 Fraser Hall. You must be a registered student and must have paid tuition and fees for at least six credits, except during the summer, to be eligible for these services.

Services for Handicapped Students

Wherever possible, special consideration is given to handicapped students to minimize any problems. Through your college office you can secure help for arranging early registration and selecting course sections, arranging adviser accessibility and classroom locations if you use a wheelchair, and obtaining specific resource aids.

Other services are available through the Office for Students with Disabilities, 12 Johnston Hall (624-3323).

Students with mobility impairments may register in 150 Williamson Hall.

Career Development Office

(345 Fraser Hall, 624-7505)

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

- individual career counseling
- job hunting workshops and support groups
- career exploration programs
- career decision-making 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 program

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 and health, employment, housing, financial aid, and emergency services.

The College and Its Procedures

Frequently consulted sources of aid and information include the following:

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

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

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

Career Development—345 Fraser Hall (624-7505)

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

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

Digital Information Access Line (D.I.A.L.)—Recorded program and services information, 101 Eddy Hall (624-6575)

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—International Student Adviser, 717 East River Road (625-7110)

Handicapped Student Assistance—Office for Students with Disabilities, 12 Johnston Hall (624-3323, voice or TTY/TTD)

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 (625-2874)

Parking—216 Printing and Graphic Arts (625-6566)

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

Religious Activities—Religious Affairs Office, 111 Temporary North of Appleby (624-9802), or Student Organization Development Center, 340 Coffman Memorial Union (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 Ombudsman 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 Ave. S.E. (625-9000)

Veterans Services—Education Services, 240 Williamson Hall, Minneapolis (625-4012); Veterans Administration representative, 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 not granted if equivalent course listed after symbol has been taken for credit
- ¶ Course preceded by symbol may be taken concurrently
- # Registration Override Permit, completed and signed by the instructor, is required for registration
- △ 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 (Afro)

Staff—*Chair*, John Wright, 883 Social Sciences Building; *Directors of Undergraduate Studies*, John Wright, 812 Social Sciences Building, and Victoria Coifman, 825 Social Sciences Building; *Director of African Studies Council*, Charles Pike, 878 Social Sciences Building

Professors: Isaacman, Porter, Southall, Ward (on leave)

Associate Professors: Buckner, Nimitz, Scott, Taborn, Wright

Assistant Professors: Brewer, Coifman, Pike, Plummer

The Afro-American studies major provides students with comprehensive knowledge and understanding of the Afro-American experience from a multi-disciplinary perspective including history, political science, psychology, sociology, music, and literature.

The African Studies major considers Africa from a multi-disciplinary perspective. Core courses are drawn from Afro-American and African studies, history, geography, and political science. There are opportunities available through the University for study and internships in Africa.

B. A. Major Sequence—Afro-American Studies

Required Preparatory Courses—1011, one of the following: 1025, 1301, or 1441

Major Requirements—3601, 3111, 3864, 3865, 3991-3992-3993, and 5900; a minimum of 16 cr from departmental courses concentrated in either the social sciences or humanities group offerings; at least 8 cr of departmental courses not included in your chosen group concentration.

A list of core courses is available from the undergraduate adviser. No more than 8 cr may be taken on S-N grading. Afro-

American studies majors are encouraged to declare a minor in an approved CLA discipline related to the major concentration.

B. A. Minor Sequence—Afro-American Studies

Minor Requirements—24 cr; 20 from 3xxx- and 5xxx-level courses. No more than 4 cr will be accepted from directed studies (3970 or 5970) courses. No more than 4 cr may be taken on S-N grading.

The minor program must be approved by the director of undergraduate studies.

B. A. Major Sequence—African Studies

Required Preparatory Course—1021

Major Requirements—3111, Hist 3431-3432, Afro 3991-3992-3993, 5800; a minimum of 20 cr from a group concentration; and 8 cr outside the group concentration, 4 cr of which must be in the humanities.

Language Requirement—Majors must complete the CLA second language requirement in one of the following languages: Arabic, Swahili or other African language, French, Portuguese, German, Spanish, or Italian.

A list of core courses is available from the undergraduate adviser. No more than 8 cr may be taken on S-N grading.

The department recommends that all African Studies majors also declare a minor in an approved CLA discipline related to the major concentration.

Minor Sequence—African Studies

Minor Requirements—24 cr in African Studies courses. No more than 8 cr may be taken on S-N grading.

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.

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

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

Major Requirements and Course Descriptions

1025f, s. BLACK AMERICANS: SOCIALIZATION, PERSONALITY, AND BEHAVIOR. (4 cr)

Taborn

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

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

1221: Beginning grammar and vocabulary; conversational drill. 1222: Grammar and vocabulary. Reading and writing. 1223: Reading, conversation, writing.

1301f. THE MUSIC OF BLACK AMERICANS.

(4 cr) Buckner

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

1334. 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.

1441. AFRO-AMERICAN HISTORY AND CULTURE. (4 cr) Plummer

Major events and themes of Afro-American history from its African beginnings to present.

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

3001: Until 1800. 3002: 1800 to present.

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

Coifman

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

3061. THE BLACK FAMILY. (4 cr) Brewer

Sociological view of the black family up to the present.

3072f, s. 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.

3091. DEVELOPMENT OF A BLACK POLITICAL STRATEGY. (4 cr) Nimitz

Political strategies developed by black philosophers and activists, American and non-American.

3105. AFRO-AMERICAN MUSIC THROUGH THE 1920s. (4 cr, \$Mus 3708) Southall

Musical contributions of black Americans from the colonial period through the Harlem Renaissance.

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

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

3111. METHODS IN AFRO-AMERICAN AND AFRICAN STUDIES. (4 cr) Coifman

Methodology and sources of the main disciplines contributing to Afro-American and African Studies. Focus on research, library resources, problem solving, and relations between disciplines.

3225f-3226w-3227s. INTERMEDIATE SWAHILI.

(4 cr per qtr; prereq 1223 or #) Pike

3225: Swahili short stories. Vocabulary and grammar.

3226: Expansion of vocabulary and comprehension of written Swahili. 3227: Advanced Swahili reading.

3253s. INTRODUCTION TO SWAHILI LITERATURE. (4 cr; prereq 3227) Pike

3301w. THE CARIBBEAN: AFRICAN MUSICAL RETENTIONS. (4 cr, \$Mus 3709) Southall

Transmissions and links between the musical cultures of Africa and the French-, English-, and Spanish-speaking peoples of the Caribbean.

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

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

3391-3392-3393. 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.

3421. CARIBBEAN HISTORY. (4 cr) Plummer

History of the Caribbean from European contact to present. Focuses on major English-, French-, and Spanish-speaking states.

3543. PSYCHOLOGY AND THE BLACK AMERICAN EXPERIENCE. (4 cr; prereq 1025 and 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) Wright

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

3592. INTRODUCTION TO BLACK WOMEN WRITERS. (4 cr) Wright

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

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

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

3864, 3865. AFRO-AMERICAN HISTORY. (4 cr per qtr, \$Hist 3864, 3865) Plummer

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

3876s. APPROACHES TO AFRICAN DEVELOPMENT. (4 cr; prereq 1021 recommended) Coifman
Study and comparison of three core documents relevant to development in Africa: World Bank's *Accelerated Development*, Organization of African United Heads of States' *Lagos Plan of Action*, and Bishops' *Pastoral Letter on U.S. Economy*. Includes critical analysis of documents.

3910. TOPICS IN AFRO-AMERICAN/AFRICAN STUDIES. (4 cr) Staff
Topics specified in the *Class Schedule*.

3970f,w,s. DIRECTED STUDIES. (1-15 cr) Staff
Guided individual reading or study.

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

5145s. 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 re-ordering of colonial landscapes, bases for North-South relations, big power interventions, and participation in the world economy.

5201. THE BLACK COMPOSER: CONTRIBUTIONS TO WESTERN MUSIC AND CULTURE. (4 cr, §Mus 5708; prereq grad or #) Southall
Achievements of black Americans in classical music.

5301. AFRICAN LITERATURE: THE NOVEL. (4 cr) Pike
The novels of continental Africa in English, French, and African languages. Non-English materials in translation.

5551. USE OF ORAL TRADITIONS AS RESOURCES FOR HISTORY: METHODS. (4 cr) Coifman
Use of spoken information passed from person to person through time, mainly in non-literate 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.

5593. THE AFRO-AMERICAN NOVEL. (4 cr) Wright
Contextual readings of 19th and 20th century black novelists including Charles Chesnutt, James Weldon Johnson, Zora Neale Hurston, Richard Wright, Chester Hines, Ann Petry, James Baldwin, John Williams, Toni Morrison, and Ishmael Reed.

5595. AFRO-AMERICAN POETRY. (4 cr) 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) Wright
Literary and intellectual traditions of black autobiography beginning with the 18th century slave narratives: Equi, Douglass, DuBois, Hurston, Wright, Malcom X, Angelou, and others.

5597. THE HARLEM RENAISSANCE. (4 cr, §Engl 5597)
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 and Marcus Garvey.

5800s. AFRICAN STUDIES INTERDISCIPLINARY SEMINAR. (4 cr) Staff
Seminar staffed by cooperating faculty from social sciences and humanities. Selected themes that benefit from interdisciplinary analysis.

5900s. AFRO-AMERICAN SEMINAR. (2-4 cr per qtr; prereq jr, sr or grad student) Staff
Scholars in Afro-American studies help students develop research projects.

5910. TOPICS IN AFRO-AMERICAN/AFRICAN STUDIES. (4 cr) Staff
Topics specified in *Class Schedule*.

5970f,w,s. 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.

College of Agriculture

CLA students may take up to 16 credits of course work offered by other colleges. The credits may be applied toward CLA degrees, but may not be used to fulfill group distribution requirements. Descriptions of courses offered by the College of Agriculture can be found in the bulletin of that college.

Akkadian

See Ancient Near Eastern and Jewish Studies.

American Indian Studies (AmIn)

Staff—Coordinator, flo wiger, 1901 University Ave. S.E.
Associate Professor: Linda Hodgwin (American Studies), on leave 1986-1987
Language Instructors: Angeline Northbird, Collins Oakgrove, Carolyn Schommer

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.

Major Requirements and Course Descriptions

Note—This major currently is being revised. Students interested in the major should check with the department for information.

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) Staff
Acquisition of speaking skills in Ojibwe.

1031-1032-1033. BEGINNING DAKOTA. (5 cr per qtr) Staff
Acquisition of speaking skills in Dakota.

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

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

History

3111. AMERICAN INDIAN HISTORY: MID-15TH CENTURY TO 1850. (4 cr, §Hist 3871)
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)
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 HISTORY AND CULTURE. (4 cr) Staff
The processes of maintenance and change in Ojibwe culture.

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

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

3161. THE METIS. (4 cr) Peterson
Social, cultural, and political history of the metis peoples of mixed Indian-white ancestry.

3211. AMERICAN INDIAN PHILOSOPHIES. (4 cr)

Comparative studies of American Indian philosophies, shamanism, transformation, tribal world views, and sources of ecological consciousness.

3221. CONTEMPORARY AMERICAN INDIAN ARTS. (4 cr)
American Indian art in the 20th century.

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

5251. AMERICAN INDIANS AND THE CINEMA. (4 cr, §AmSt 5251)
The visage and stereotypes of tribal people in selected motion pictures from silent documentaries to six-guns and the new Westerns.

Contemporary Issues

5322. CONTEMPORARY INDIAN EDUCATION. (4 cr; prereq 3121 or #)
Critical issues in the education of American Indian youth.

5341. CONTEMPORARY INDIAN MOVEMENTS. (4 cr)
Organizations and social movements during the 20th century.

Tribal Development

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

5422. CHANGE AND DEVELOPMENT IN INDIAN COMMUNITIES. (4 cr; prereq 3112 or #)
Sources, nature, and consequences of social and economic development and change in Indian communities.

Special Topics

5920. SEMINAR IN AMERICAN INDIAN STUDIES. (Cr ar; prereq stated in the *Class Schedule*) Staff
Topics in American Indian history, selected on a year-to-year basis.

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.

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. (4-15 cr per qtr; prereq by petition only) Staff
Independent research under faculty guidance.

American Studies (AmSt)

Staff—Chair, Edward Griffin, 104 Scott Hall; **Director of Undergraduate Studies:** Elaine Tyler May (on leave 1986-87)

Professors: Delattre; Noble

Associate Professors: Hogan (on leave 1986-87), E. May (on leave 1986-87), Yates

Assistant Professor: L. May, G. Lipsitz

Adjunct Faculty—Professors: C. Anderson (English), J. Anderson (Mechanical Engineering), Bagley (Social, Psychological, and Philosophic Foundations of Education), Bales (English), Ball (Political Science), Berman (History), Born (Health Ecology), Brauer (History), Chambers (History), Cooperman (Sociology), Fine (Sociology), Furia (English), Gillmor (Journalism), Griffin (English), Howe (History), Johnson (Sociology), Layton (Mechanical Engineering and History of Science and Technology), Lukermann (Geography), Marling (Art History), McNaron (English), Menard (History), Murphy (History), Roth (English), Sarles (Anthropology), Southall (Afro-American Studies), Spencer (Anthropology), Stekert (English), Stuewer (Physics and History of Science and Technology), Sykes (Speech Communication), Vecoli (History), G. Wright (English)

Associate Professors: Archer (Humanities), Buckner (Music and Afro-American Studies), Dicken-Garcia (Journalism), Dobbert (Social, Psychological, and Philosophical Foundations of Education), Dolan (Philosophy), Evans (History), Gefen (English), Green (History), Hampl (English), Hoyle (Children's Literature Research Collection), Roberts (Journalism), Ross (Religious Studies and Student Affairs), Spear (History), Ward (Journalism), J. Wright (English and Afro-American Studies)

Assistant Professors: Prell (Anthropology), Silberman (Art History)

Lecturers: Martin (Coordinator, Urban Studies), Tsuchida (Director, Asian/Pacific Learning Center), Wilbers (Director, Student Academic Support Services)

The program in American studies provides an interdisciplinary framework for exploration of approaches to American culture, past and present, and the relationships among aspects of life and experience in the United States.

B.A. Major Sequence

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

Major Requirements—44 cr in 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. 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 required.

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

Interdisciplinary study of American culture, using four sources—a related event, literary document, artifact, and place—to help students understand large cultural issues. *1001*: Origins of American culture through mid-19th century. *1002*: Mid-19th century to the 1920s. *1003*: 1920s to the present.

1920. TOPICS IN AMERICAN STUDIES. (4 cr per qtr [12 cr max])

Topics specified in the *Class Schedule*.

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.

Major Requirements and Course Descriptions

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)

Patterns of American cultural expression, values, and lifestyles analyzed within the context of the dominant "normative" patterns of American life.

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 deals with a problem related to a representative theme, figure, or period.

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 and Jewish Studies

Staff—Chair, Coordinator, and Director of Undergraduate Studies, Tzvee Zahavy, 178 Klaeber Court

Associate Professors: Paradise, Reisman, Zahavy

Adjunct Faculty—Professors: Bachrach (History), Berman (History), Cooperman (Sociology)

Associate Professors: Chiat, Prell (Anthropology), Ross (Religious Studies)

Major programs are offered in ancient Near Eastern studies, Hebrew language and literature, and Jewish studies.

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

B.A. Major Sequence—Jewish Studies

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

Akkadian (Akka)

5011-5012-5013. ELEMENTARY AKKADIAN.

(4 cr per qtr; for advanced undergrads by permission only and for grad students)

Cuneiform script. Akkadian grammar, written drills, readings from historical annals, law collections, religious, and epic literature.

Ancient Near Eastern Studies (ANEJ)

1001/3001. THE BIBLE: NARRATIVE TEXTS.

(4 cr)

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)

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)

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)

The Sumerian-Akkadian literary and historical tradition. Relationships of the Mesopotamian traditions, particularly to the Old Testament.

3251. THE MODERN STUDY OF THE OLD TESTAMENT. (4 cr)

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.

3501, 3502, 3505. ANCIENT ISRAEL. (4 cr per qtr, \$5505)

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.

5505. ANCIENT ISRAEL. (4 cr per qtr, \$3505; prereq grad student or #)

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; for students preparing for biblical studies, ancient history majors, and students specializing in Semitic languages; recommended for students of Talmud; prereq 1 yr Hebrew or Arabic or #)

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.

1104-1105-1106. INTRODUCTION TO BIBLICAL HEBREW. (5 cr per qtr)

Hebrew alphabet, basic grammar, and vocabulary needed to read narrative portion of Bible. For students without previous knowledge of Hebrew.

3011f-3012w-3013s. INTERMEDIATE HEBREW. (5 cr per qtr; prereq 1103, qualified fr or #)

Modern short stories, contemporary idiom, newspaper articles, biblical narratives. Review of fundamentals of grammar. Stresses 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 #)

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 #)

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 #)

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.

Major Requirements and Course Descriptions

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.

Jewish Studies (JwSt)

1034. INTRODUCTION TO JUDAISM. (4 cr, §3034, §RelS 1034)

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)

Meets with 1034. Additional written assignments and reading.

3100. JUDAISM IN THE TIME OF EARLY CHRISTIANITY (70-640). (4 cr)

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)

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)

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.

3142. JUDAISM IN THE MIDDLE AGES. (4 cr per qtr)

Jewish philosophy and mysticism in the Middle Ages. Works of Sa'adia Gaon, Judah Halevi, Maimonides. Faith and reason, existence of God, creation, good and evil. Mystical doctrines of the Zohar, Lurianic Qabalah, Shabbatai Zvi.

3315. CONTEMPORARY ISRAELI LITERATURE IN TRANSLATION. (4 cr)

Modern short stories and poetry. Works of Agnon, Yizhar, Hazaz, Yehoshua, Greenberg, Amihai, Pagis, and others. Alienation, crisis of faith, war, genocide, and freedom.

3401, 3402, 3403. ART AND ARCHITECTURE OF THE JEWISH PEOPLE. (4 cr per qtr)

3401: The ancient world: 2100 B.C.E.-638 C.E. Survey of the art and architecture of the Jewish people from time of exodus to rise of Islam. **3402:** Jews in the Muslim and Christian World—7th-18th centuries. Developments in the art and architecture of the Jewish people in response to Muslim and Christian influences. **3403:** The modern world—19th-20th centuries. Pre- and post-emancipation Jewish artists; art in Israel today.

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.

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.

Clas 5089. INTRODUCTION TO BIBLICAL ARCHAEOLOGY. (4 cr)

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.

5621. COMPARATIVE SOCIOLOGY OF JEWISH COMMUNITIES. (4 cr; prereq Soc 1001 or 1002 or #)

Historical, cross-societal analysis of Jewish communities. Social organization, structure of Diaspora communities. Sephardic, Ashkenazic, Asian communities. Jew in American society; demography, social ecology, social psychology, stratification patterns.

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.

Sumerian (Sum)

5011-5012. **ELEMENTARY SUMERIAN.** (4 cr per qtr; for advanced undergrads who have had 2 yrs of another foreign language and for grad students) Sumerian writing and grammar. Readings from classical Sumerian literary and historical texts.

Anthropology

Staff—Chair, Stephen Gudeman, 200 Ford Hall; **Director of Undergraduate Studies,** William L. Rowe, 290B Ford Hall

Professor Emeritus: Spencer

Professors: Gerlach, Gudeman, Johnson, Miller, Ogan, Rowe

Associate Professors: Dunnigan, Etkin, Gibbon, Ingham, Penn, Spector

Assistant Professors: Hastorf, Lipset, Prell

Anthropology is the study of human cultural, social, and biological groupings, past and present. It analyzes the nature and processes of change in these groupings, emphasizing cross-cultural comparisons.

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.

B.A. Major Sequence

Required Preparatory Courses—1101, 1102

Major Requirements—Two courses selected from 3201, 3301, 3302, 3366

Anth 3101 or 3592

Senior requirement: individual research project completed through directed research or senior seminar

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 in either sociocultural anthropology, archaeological anthropology, biological anthropology, or linguistic anthropology

Course selections must be approved by the undergraduate faculty adviser.

Introductory

1101. HUMAN ORIGINS. (5 cr)

World prehistory as investigated by anthropologists. Methods and concepts used by anthropologists to study prehistoric human biological and cultural development.

1101H. HONORS COURSE: HUMAN ORIGINS.

(5 cr; prereq B avg or #)

For description, see 1101.

1102. 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.

1102H. 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.

3001. HUMAN BIOLOGY. (4 cr; prereq 1101 or introductory biology course or #)

Organic evolutionary processes; contemporary human variability and behavioral adaptations; genetic traits of simple and complex inheritance.

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.

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

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

Special Topics

3960. ANTHROPOLOGY PROSEMINAR. (Cr ar; 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.

Major Requirements and Course Descriptions

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 consisting of planning and method statements outlining study plans in line with career plans. To be completed and approved immediately after declaration of an honors major in anthropology.

5910, 5920. TOPICS IN ANTHROPOLOGY.

(Cr ar)

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

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

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

5961. SENIOR RESEARCH PROJECT. (4 cr; prereq sr 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

3101. HISTORY OF ANTHROPOLOGY. (4 cr; prereq 1102 and 15 cr in 3xxx and 5xxx courses)

Beginnings of anthropology as a discipline; associated intellectual climate and context. Subfields of archaeology, ethnology, physical anthropology, and linguistics.

3201. METHOD AND THEORY IN CULTURAL AND SOCIAL ANTHROPOLOGY. (5 cr; prereq 1102 or #)

Description and explanation in anthropology. Role of theory in defining problems. Subjective and objective approaches to fieldwork.

3301. METHOD AND THEORY IN ARCHAEOLOGY. (5 cr; prereq 1101 or #)

Field methods, systems of data recording, analytical methods, and their conceptual bases. Abstract theory integrated with specific case material. Laboratory exercises in application of artifact analysis.

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. METHOD AND THEORY IN ANTHROPOLOGICAL LINGUISTICS. (5 cr; prereq 1102 or 5102 or #)

Linguistic theory and practice as tools for anthropological fieldwork; phonological, morphological, and syntactic problems in world languages.

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.

3592. HISTORY OF ARCHAEOLOGY. (4 cr; prereq 15 cr in anthropology)

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

5175. ETHNOARCHAEOLOGY. (4 cr; prereq 1101, 3301 or #)

Archaeological approaches to the study of historically known native American peoples. Uses of historical documents and ethnographic data in archaeological research.

5185. MEDICAL ANTHROPOLOGY. (4 cr; prereq jr or sr or grad)

Humans in health and disease, from biological and behavioral perspectives; origins of human disease, relationship to lifestyles. Comparison of health beliefs and medical care in Western and non-Western societies.

5186. NUTRITIONAL ANTHROPOLOGY. (4 cr; prereq jr or sr or grad)

Biocultural perspectives on cross-cultural dietary patterns. Biocultural evolution of human diet; sociocultural factors affecting food choice and taboos and their implications for nutritional health; methods and nutritional correlates of dietary change and development.

5187. FOLK MEDICAL SYSTEMS: CROSS-CULTURAL STUDIES. (4 cr; prereq jr or sr or grad)

Concepts of disease and treatment of the ill in tribal and folk societies around the world.

5305. STUDIES IN ANTHROPOLOGICAL 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?

5366. METHOD AND THEORY IN ANTHROPOLOGICAL LINGUISTICS. (4 cr; prereq 1102 or 5102 or #)

Linguistic theory and practice as tools in fieldwork; phonological, morphological, and syntactic problems in world languages.

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.

5413. FIELD METHODS IN ANTHROPOLOGICAL LINGUISTICS. (4 cr; prereq #)

Linguistic structures of one or two languages outside the Indo-European speech family. For students engaging in anthropological field research.

5592 (formerly 3592). HISTORY OF ARCHAEOLOGY. (4 cr; prereq 15 cr in anthropology)

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

Cross-Cultural Studies

Afro 3011f. SOCIAL CHANGE IN EAST AND CENTRAL AFRICA. (4 cr)

Processes that shaped cultural differences, social structures, and economic, political, and religious systems in pre- and post-colonial east and central Africa. Independence, the influence of external relations and government policy on rural-urban migration, urbanization, and industrialization.

Afro 3013s. URBANIZATION IN AFRICA. (4 cr)
African urban development. Links between towns and countryside. Regal-ritual cities; mercantile cities and city-states; administrative cities; colonial cities and company towns; industrial cities and illegal urban settlements.

3211. NATIVE PEOPLES OF NORTH AMERICA. (4 cr; prereq 1102 or #)

Aboriginal cultures of native North America. Effects of culture contact.

3212. INDIANS OF THE GREATER SOUTH-WEST. (4 cr; prereq 1102 or #)

Cultures and histories of Indian peoples in the southwestern United States and northwestern Mexico.

3221. NATIVE PEOPLES OF SOUTH AMERICA. (4 cr; prereq 1102 or #)

Ethnographic survey. Prehistory of various areas. Spanish and Portuguese contact; adjustment of various tribes to modern conditions.

3222. PEOPLES AND CULTURES OF MIDDLE AMERICA. (4 cr; prereq 1102 or #)

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; prereq 1102 or #)

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

3241. PEOPLES AND CULTURES OF AFRICA. (4 cr, \$Afro 3501; prereq 1102 or #)

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.

3251. ISLAMIC CULTURE SPHERE. (4 cr; prereq 1102 or #)

Mohammed and founding of Islam. Development and spread of Islamic religion, law, government, and other institutions in Middle East, Africa, and Asia. Culture and society in contemporary Middle East.

3261. INDIAN CULTURE AND SOCIETY. (4 cr; prereq 1102 or #)

Tribes, castes, and cultural history of South Asia. Cultural influences from India on Southeast Asia.

3281. CULTURE AND SOCIETY IN CHINA AND JAPAN. (4 cr; prereq 1102 or #)

Chinese institutions and other cultural manifestations. Influence on cultures of Japan, Korea, and Vietnam. Analysis of and comparison between contemporary Chinese and Japanese societies.

3293 (formerly 3291 and 3292). PEOPLES AND CULTURES OF THE PACIFIC ISLANDS. (4 cr; prereq 1102 or #)

Life on Pacific islands, from Hawaii to New Guinea. Comparison of traditional cultural adaptations. Impact of Western civilization on islanders' lives. Examination of Oceanic data in the context of anthropological thought.

3501. WESTERN GREAT LAKES ARCHAEOLOGY. (4 cr; prereq 1101 or #)

Prehistoric and historic site archaeology of Minnesota in the context of the western Great Lakes and northern plains regions.

3511. PREHISTORIC ARCHAEOLOGY OF NORTH AMERICA. (4 cr; prereq 1101 or #)

Prehistoric archaeology of North America north of Mexico. Techniques, methods, and goals of prehistoric archaeology.

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

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

3533. PREHISTORIC ARCHAEOLOGY OF INDIA AND PAKISTAN. (4 cr; prereq 1101 or #)

Origins and developments of major Asian cultural traditions.

Major Requirements and Course Descriptions

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.

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

Systems of production and distribution, especially in nonindustrial societies. Relationship among economic and social, political, religious, psychological, and environmental factors.

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

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

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.

5161. LANGUAGE AND CULTURE. (4 cr; prereq 1102 or 5102 or #)

Relation of language to behavior; languages as systems of thought, logic, and orientation; impact of languages on cultures; selected linguistic and cultural systems; glottochronology.

5335. THE POLITICS OF GENDER AND RITUAL. (4 cr; prereq 1102 or #)

Symbolism of gender in ritual systems of small-scale societies, and critical examination of theoretical models commonly applied.

Mind, Self, and Society

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

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

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. CULTURAL ECOLOGY. (4 cr; prereq 1101, 1102 or 5102, one ethnographic area course or #)

The literature of cultural ecology; biological approach to ecosystems and population studies.

5117. ENERGY, RESOURCE USE, AND SYSTEM CHANGE. (4 cr)

Social-cultural system factors in the development, production, control, distribution, and use of energy, water, key resources, and food in the United States and other countries. Social-cultural evolution, interaction among different societies; growth and no-growth issues; emerging global interdependence.

5176. ENVIRONMENTAL ARCHAEOLOGY. (4 cr; prereq 1101, 3301 or #)

Field and laboratory techniques used to reconstruct past environmental conditions. Paleoeological interpretation.

5177. ARCHAEOLOGICAL RESOURCE MANAGEMENT. (4 cr; prereq 1101)

Public archaeology; impact of federal and state laws, and regulations on archaeological site survey, mitigation, preservation, and interpretation.

Contemporary, Complex Societies

5144. THE ANTHROPOLOGY OF AMERICAN EDUCATION. (3 cr, §SPFE 5172; prereq 1102 or 5102 or 5145 or SPFE 5178 or §1102 or §5102 or §5145 or §SPFE 5178 or #)

Application of anthropological principles to study of socialization, schooling, and culture transmission in the United States. Use of anthropological concepts for study of American education systems and analysis of introduced educational change.

5145. ANTHROPOLOGY AND EDUCATION.

(4 cr, SSPFE 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, diffusion, and acculturation. Effects of colonialism, urbanization, and modernization. Analysis of developing societies. Applied anthropology.

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.

5155. CURRENT ISSUES IN CROSS-CULTURAL PERSPECTIVE.

(4 cr; prereq 1102 or 5102 or #)
 Anthropological, cross-cultural perspectives on inter-related crises in present-day human experience. Condition of family, changing male-female relations, population growth, environment degradation.

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 South and Southwest Asian Studies.

Aramaic

See Ancient Near Eastern and Jewish Studies.

Architecture (Arch)

Institute of Technology

Staff—*Head*, Harrison Fraker, 110 Architecture; *Director of Undergraduate Studies*, Stephen Weeks; *Director of Graduate Studies*, John Rauma; *Director of Undergraduate Advising*, Julia Robinson

Professors: Clemence, Fraker, Grebner, Martin, Parker, Rauma, Stageberg, Thompson

Associate Professors: Dittmar, Fishman, Kodet, LaVine, Lockhart, Morrill, Robinson, Rockcastle, Satkowski, Thorbeck, Weeks

Assistant Professors: Anderson, Burton, Condon, Cummings, Dunwiddie, Jara, Mulfinger, Sykes, Tanick, Tollefson, Ubbelohde

Lecturers: Bellows, De Angelo, Geiger, Graham, Jacob, Mallgrave, Ng, Ohlhausen, Rafferty, Russek, Sand, Scherer, Susanka, Yunker

Adjunct Faculty—Cerny (Civil and Mineral Engineering), Lu (Lowertown Redevelopment Corporation), Shippee (Center for Urban and Regional Affairs)

Architecture is an art and science that gives physical expression to the capacities, accomplishments, and ideas of people and their times. It is concerned with the total environment and, most importantly, the built environment. The architect seeks to plan, design, or construct enclosed and open space to encourage and promote human activities and heighten human aspirations.

To be considered for admission to the entry-level architectural design sequence (Arch 3081-3082-3083), you must have completed, or be in the process of completing, all required preparatory courses, a minimum of 45 credits, prior to application by April 1 for admission the following September. (Use Form AR 110.) Admission decisions are based on academic record, college work completed, and submission of the required design problem set available at the school. You may also submit evidence of graphic communication and artistic ability. (The school waives responsibility for loss or damage to the portfolio.) Required courses must be completed prior to enrollment in the design sequence. All students are encouraged to acquire and read the program packet available in 110 Architecture (624-7866).

Major Requirements and Course Descriptions

B.A. Major Sequence

Required Preparatory Courses—1021, 1022, 1023; Phys 1041-1042, 1045-1046; Math 1211-1221; 8 cr in ArtS 1101 and 1404 or architectural drawing Arch 1041, 1042, 1043, or 1010; Comp 1011

Major Requirements—3081-3082-3083, 3091-3092-3093

Three courses chosen from 5051, 5052, 5053, 5054, 5055, 5056, 5057, 5061
Comp 3012 or 3013 or 3031

Additional Information—The four-year CLA program, leading to the B.A. with a major in architecture, is normally seen as preprofessional preparation for admission to the Graduate School for two to three additional years of work toward the professional degree master of architecture (M.Arch.), or for admission to the Institute of Technology for two additional years of work toward the professional degree bachelor of architecture (B.Arch.). If you plan to pursue either the undergraduate or graduate professional degree, you should consult the School of Architecture and Landscape Architecture office for selection of an appropriate sequence and should complete the following courses: AEM 3092-3093¹, and Arch 3061-3062¹. Consult the *Institute of Technology Bulletin* for course descriptions. In order to continue study for a B.Arch. degree, you must change colleges and be admitted to IT in the spring quarter prior to enrolling in Arch 5111¹. If you plan to complete the M.Arch. degree, you must be accepted by the Graduate School before continuing architectural design studies beyond Arch 3093. You are responsible for verifying program requirements each quarter—consult handouts available in the school office.

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

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)
The skills, media, and techniques of architectural graphics communication, including perspective systems, shade and shadow, color, freehand drawing, and organizing presentation material.

3001f. ENVIRONMENTAL DESIGN: MAN AND ENVIRONMENT. (4 cr, §LA 3001)
Interaction of people with the environment, using the arts and natural and social sciences as background for readings, lectures, discussions, and workshop sessions.

3002w. ENVIRONMENTAL DESIGN: TOOLS AND PROCESSES. (4 cr, §LA 3002; prereq 3001)
Nature and the effects of tools and processes of environmental change, ranging from buildings and landscapes to economic policies, climate, and myths. Readings, lectures, discussions, and workshop sessions.

3003s. ENVIRONMENTAL DESIGN: IMPLEMENTATION AND EVALUATION. (4 cr, §LA 3003; prereq 3002)
Design projects, discussions, and readings exploring personal abilities to implement and evaluate environmental change.

3081-3082-3083. ARCHITECTURAL DESIGN. (6 cr per qtr; prereq arch major, 18 lab hrs per wk)
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 arch major, 3083; 18 lab hrs per wk)
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 #)
Individual programs to meet objectives not served in other courses.

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

5052. EARLY MEDIEVAL ARCHITECTURE. (4 cr; prereq 1021 or #; 3 lect and 1 seminar hrs per wk)
Architecture and urban design during early Christian, Byzantine, Islamic, Carolingian, and Romanesque periods in the Near East and western Europe until 1150.

¹These courses do not carry CLA credit. CLA students may apply 16 non-CLA credits towards graduation.

5053. GOTHIC ARCHITECTURE. (4 cr; prereq 1021 or #; 3 lect and 1 seminar hrs per wk)
Architecture and urban design in western Europe from 1150 until 1400.

5054. RENAISSANCE AND BAROQUE ARCHITECTURE. (4 cr; prereq 1021 or #; 3 lect and 1 seminar hrs per wk)
Architecture and urban design in Italy, Spain, France, Germany, and the Low Countries from 1400 to the French Revolution.

5055. ENGLISH AND EARLY AMERICAN ARCHITECTURE. (4 cr; prereq 1021 or #; 3 lect and 1 seminar hrs per wk)
The architecture of pre-Columbian civilizations and the development of architecture and urban design in America and England from 1500 until the Civil War.

5056. MODERN ARCHITECTURE. (4 cr; prereq 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.

5057. ASIAN ARCHITECTURE. (4 cr; prereq 1021 or #; 3 lect and 1 seminar hrs per wk)
History of architecture and urban design in western, southern, and eastern Asia.

5061. CONTEMPORARY ARCHITECTURE. (4 cr; prereq 1022, 3083 or #; 3 lect and 1 seminar hrs per wk)
Developments, theories, movements, and trends in architecture and urban design from World War II to the present.

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

5104. SEMINAR: EUROPEAN ARCHITECTURE. (4 cr; prereq 5056 or 5061 or #; 4 seminar hrs per wk)
Contemporary architecture from the beginning of the modern movement to the present; contributions of August Perret, Peter Behrens, Walter Gropius and the Bauhaus, Le Corbusier, and the early work of Mies van der Rohe.

5105. SEMINAR: SCANDINAVIAN ARCHITECTURE. (4 cr; prereq 5056 or 5061 or #; 4 seminar hrs per wk)
Scandinavian architectural history; origin and development of modern architecture in Denmark, Finland, Norway, and Sweden.

5106. SEMINAR: AMERICAN ARCHITECTURE. (4 cr; prereq 5056 or 5061 or #; 4 seminar hrs per wk)
Contemporary U.S. architecture from the period of Henry Hobson Richardson to the present; contributions of Louis H. Sullivan, Frank Lloyd Wright, Eliel and Eero Saarinen, Walter Gropius, Mies van der Rohe, Louis Kahn, Ralph Rapson, Robert Venturi, Frank Gehry, Michael Graves, and others.

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

5170. CITYSCAPE. (3 cr; prereq 3093 or #; hrs ar)
The city and its components as aesthetic elements. Factors that have helped to generate urban form.

5171-5172. URBAN FORM. (3 cr per qtr; prereq 5113, 5138 or #, arch major)
Theory, principles, and methodology involved in urban design.

5850. TOPICS IN THEORY. (2 cr; prereq arch major)
Special topics in architecture examined in a philosophical and theoretical context.

5852. ARCHITECTURE: THEORY AND PHILOSOPHY. (3 cr; prereq 3093, arch major or #)
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.

Major Requirements and Course Descriptions

5853. ARCHITECTURE AS THOUGHT AND DESIGN PROCESS. (3 cr; prereq 3093, arch major or #)
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.

5854. THE LANGUAGE OF ARCHITECTURE: SEMIOTICS, SYMBOLISM, AND METAPHOR. (3 cr; prereq 3083, arch major or #)
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, arch major or #)
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.

5856. ARCHITECTURE: FORM AND MEANING. (3 cr; prereq 3093, arch major or #)
Architectural form, order, and meaning relative to architecture as an aesthetic, social, environmental, and technical object. Current theories and concepts; their potential and implications.

5950. TOPICS IN ARCHITECTURE. (Cr ar; prereq 3093 or #)
Special topics of concern.

5951. ARCHITECTURE AND BEHAVIOR. (3 cr; prereq 3083, arch major or #)
Relation between people and built environments; theoretical basis for exchange between designers and behavioral scientists, impact of knowledge of behavior on design process (design-evaluation-programming cycle), behavioral findings, problems of implementation. Guest lecturers and reading of materials from related disciplines.

5953. HOUSING AND VALUES. (3 cr; prereq upper division or grad student; 3 lect/discussion hrs per wk)
Meanings and values attached to housing in different cultures, at various stages in the life cycle, and in differing climatic situations. Impact of housing heritage on housing choice, and potential impact of emerging constraints (e.g., energy availability) on housing decisions.

5954. ARCHITECTURE AND BEHAVIOR RESEARCH METHODS. (3 cr; prereq 3083, arch major or #)
Use of behavior research in architectural practice; evaluation of buildings, architectural programming methods, application of findings in architectural design. The design and implementation of a behavioral research project.

5958. ENERGY AND ARCHITECTURE. (4 cr; prereq arch major or adult special, 3093 or #)
Relationship of conservation, passive solar, and active solar strategies in the design of small buildings. Exercises and case studies of systems, calculating techniques, and evaluative methods as a basis for understanding space-heat requirements.

5970. DIRECTED STUDIES. (Cr ar; prereq #)
Individual programs to meet objectives not served in other courses.

Art History (ArtH)

Staff—Chair, Marion J. Nelson, 108a Jones Hall; **Director of Undergraduate Studies,** John Steyaert, 204 Jones Hall
Professors: Asher, Canedy, Cooper, Marling, McNally, Nelson, Poor, Simon, Weisberg
Associate Professors: Haxthausen, Steyaert, Stoughton
Assistant Professor: Silberman

The Department of Art History seeks to help you develop an awareness of your visual environment through examination of architecture, sculpture, painting, and other related arts.

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 the history of art and an M.A. in museology are also offered through the Graduate School.

General Courses—All 1xxx courses and most 3xxx courses are designed for general audiences.

B.A. Major Sequence

Required Preparatory Courses—4 cr in art practice (consult the director of undergraduate studies); five qtrs or equiv in a second language (Route II does not satisfy this requirement). Art history majors are strongly encouraged to enroll in English composition 3013, Writing for Arts Other Than Literature (4 cr).

Major Requirements—3008, 3009, 3011, 3012, 3971, 3895; a minimum of 16 credits in four additional art history courses, one of which must be designated as the "project course" at the 5xxx-level (see Major Project, below).

Major Project: a) 3895 (to be taken in the junior year); b) project course, preliminary research paper in any 5xxx-level art history course (to be selected in consultation with the instructor); c) 3971, major project research paper. The major project courses must be taken on A-F grading and must be selected in consultation with the director of undergraduate studies.

Minor Sequence

Required Preparatory Course—1002 or equiv

Minor Requirements—20 cr including three of the following courses: 3008, 3009, 3011, 3012; 8 of these cr must be selected to fulfill one of the following options:

1. **General Coverage of the Field**—Complete the four courses listed above and one 3xxx or 5xxx course in non-Western art (e.g., Asian, Meso-American, African, Oceanic).

2. **Support of a Major Field**—Complete three of the four courses listed above 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 to the minor. The minor program must be approved by 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.

1015. ART IN WESTERN CIVILIZATION. (4 cr)
Major achievements of Western society in the arts in their historical and cultural settings. Sir Kenneth Clark's 13 hour-length films titled "Civilisation" take the place of lectures. Interdisciplinary.

1016. INTRODUCTION TO ASIAN ART. (4 cr)
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) 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 to Gothic period.

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, Simon, Weisberg
Major monuments and concepts of the modern period: sculpture, architecture, painting, and prints.

3013. INTRODUCTION TO FAR EASTERN ART. (4 cr, §EAS 3013) Asher, Poor
Major themes of Far Eastern art. The arts of China and Japan (not all-inclusive).

3014. ART OF INDIA. (4 cr) 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. TOPICS IN INDIAN ART. (5 cr; prereq 3014; offered alt yrs) Asher
Buddhist art in India and Southeast Asia.

3142. ARTS OF EGYPT AND THE NEAR EAST. (4 cr) 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.

Major Requirements and Course Descriptions

3261. THE ILLUMINATED BOOK. (4 cr; offered alt yrs) Steyaert
Production of illuminated books in the Middle Ages; evolution in types, decorative schemes, and style.

3303. BAROQUE AND ROCOCO PAINTING IN FRANCE. (4 cr) Stoughton
French painting of the 17th and first half of the 18th centuries.

3401. ART AND ARCHITECTURE OF THE JEWISH PEOPLE. (4 cr, §JwSt 3401)
Art and architecture of the Jewish people from the exodus to the rise of Islam.

3402. ART AND ARCHITECTURE OF THE JEWISH PEOPLE. (4 cr, §JwSt 3402)
Developments in the art and architecture of the Jewish people in response to Muslim and Christian influences.

3403. ART AND ARCHITECTURE OF THE JEWISH PEOPLE. (4 cr, §JwSt 3403)
Pre- and post-emancipation Jewish artists, including contemporary Israeli art.

3422. HISTORY OF 19TH-CENTURY GRAPHIC ARTS. (5 cr, §ArtH 5422; offered alt yrs) Weisberg
History and theory of the creation and evolution of lithography, social caricature (e.g., Daumier, Faverni), 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.

3465. MASTER PAINTERS OF THE 19TH CENTURY. (4 cr) Weisberg
European artists selected for their originality, aesthetic excellence, or subsequent influence: Goya, Constable, Cezanne, and Van Gogh.

3466. THE ORIGINS OF MODERN ART. (4 cr; prereq 4 cr of art history; offered when feasible) Weisberg
The sources of modernism: impressionism, post-impressionism, symbolism, arts and crafts movement, aestheticism, art nouveau.

3467. MODERN ART. (4 cr; prereq 4 cr of art history) Cooper, Simon
Major directions in late 19th- and 20th-century art. The influence of mass media advertising and advanced technology on modern art.

3468. MODERN EXPRESSIONISM: VAN GOGH TO BECKMANN. (4 cr; offered alt yrs) Simon
Twelve modern expressionists: Van Gogh, Munch, Ensor, Kollwitz, Rouault, Schiele, Kokoschka, Barlach, Nolde, Kirchner, Grosz, and Beckmann.

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 DEPRESSION TO THE PRESENT. (4 cr) Marling
For description, see 3577.

3654. MAJOR ACHIEVEMENTS IN SCANDINAVIAN ART. (4 cr; offered alt yrs) Nelson
From Bronze Age casting and cliff carving through migration jewelry, Viking ships, stave churches, royal castles, folk painting, and Edvard Munch, to modern furniture and glass.

3895. METHODS OF WRITING AND RESEARCH IN ART HISTORY. (4 cr; prereq ArtH major)
Short writing assignments exploring stylistic, formal, iconographic, historical, and qualitative approaches to works of art. Instruction in use of research.

3909. SURVEY OF ISLAMIC ART. (4 cr; offered when feasible)
Architecture, painting, and minor arts of the Islamic world.

3921-3922-3923. 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.

3940. TOPICS IN ART HISTORY. (2-5 cr)

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

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, 3895, #)
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.

5103. HELLENISTIC ART AND ARCHAEOLOGY. (4 cr, §Clas 5103; prereq jr or #) Coulson, McNally
Sculpture, architecture, painting, and topography in developing centers of Hellenistic culture in the eastern Mediterranean from the beginning of the fourth century B.C. to the end of the Hellenistic period.

5104. ROMAN ARCHITECTURE. (5 cr, §Clas 5104; prereq jr or #) Cooper, McNally
Buildings in Rome and the empire from the fifth century B.C. to the fourth century A.D. Major archaeological sites.

5105. ROMAN PAINTING AND MOSAICS. (5 cr, §Clas 5105; prereq jr 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 #) 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.

5111. BRONZE AGE ART AND ARCHITECTURE IN GREECE, CA. 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 AND CLASSICAL GREEK ART AND ARCHAEOLOGY. (4 cr, §Clas 5113; prereq jr or #) Coulson, McNally
Greek architecture, sculpture, and painting from 9th-5th centuries B.C. Examination of remains of Greek culture; archaeological problems, such as identifying and dating buildings; analysis of methods and techniques.

5203. EARLY MEDIEVAL ART. (5 cr; prereq one art history course)
Architecture, sculpture, painting, and minor arts of the Mediterranean world and Western Europe from the early Christian to Romanesque periods.

5214. GOTHIC ARCHITECTURE. (5 cr; prereq 4 cr of medieval art history or #) Sheppard, Stones
Gothic architecture from the mid-12th to the early 16th centuries in France, Germany, England, Italy, and Spain; later regional variants.

5215. ROMANESQUE AND GOTHIC PAINTING. (5 cr; prereq 4 cr of medieval art history or #; offered alt yrs) Stones
Wall and panel painting, mosaics, and manuscript illumination in France, Germany, England, Italy, and Spain from the 11th to the 14th centuries.

5234. GOTHIC SCULPTURE OF THE CATHEDRAL AGE. (5 cr; prereq 3009 or grad or #) Steyaert
Sculpture in France and Germany from 1150 to 1350. Stylistic evolution.

5306. ITALIAN ART OF THE 14TH CENTURY. (4 cr; prereq one art history course or #; offered alt yrs) Canedy
Emergence of Italian painting and the proto-Renaissance; subsequent counterdirections during the Black Death and international style periods.

5307. 15TH-CENTURY ITALIAN ARCHITECTURE, SCULPTURE, AND PAINTING. (4 cr; prereq 3011 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, and 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 5313 or grad or #; offered alt yrs) Canedy
Mannerism and other trends between the high Renaissance and the baroque.

5315. DRAWINGS AND GRAPHICS OF THE RENAISSANCE. (5 cr; prereq 5307 or 5313 or grad or #; offered alt yrs) Canedy
Drawings and graphics from the early Renaissance to the baroque. Original works.

5324. 15TH-CENTURY PAINTING IN NORTHERN EUROPE. (5 cr; prereq 3009 or 3011 or grad or #) Steyaert
Painting in the Netherlands, France, and Germany during the late Gothic period; its influences.

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 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; prereq 3011 or grad or #; offered alt yrs) Stoughton
Rococo and neoclassical painting, sculpture, and architecture.

5358. 18TH-CENTURY ART IN ITALY, GERMANY, AUSTRIA. (4 cr; prereq 3011 or grad 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 (formerly 5441). AGE OF REVOLUTION: FRENCH PAINTING 1789-1848. (5 cr, §Fren 5441; 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.

Major Requirements and Course Descriptions

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 (formerly 5442). 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.

5464. LATER 20TH-CENTURY PAINTING. (5 cr;

prereq one American or modern art course or #; offered alt yrs) Simon

Painting after the mid-1920s.

5466. THE AVANT-GARDE. (5 cr; prereq 3012 or 5463 or #; offered alt yrs) Simon

History and theory of the avant-garde as applied to contemporary art: anti-art tendencies and movements, Marshall McLuhan, Buckminster Fuller, John Cage, rock music, and the "counterculture"; structuralism, pop art, and conceptual art.

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.

5641. SCANDINAVIAN ART OF THE 19TH AND 20TH CENTURIES. (5 cr; prereq one art history course or #) Nelson

Painting, sculpture, architecture, and decorative arts; the rise of expressionism in the fine arts and of "Scandinavian modern" in design.

5643. PREHISTORIC ART OF NORTHERN EUROPE. (4 cr; prereq one art history course or #) Nelson

Art north of the Alps from the Ice Age through the Celtic period. Cave painting, sculpture, funerary architecture, ceramics, and metalwork.

5644. MEDIEVAL ART OF SCANDINAVIA. (4 cr; prereq one art history course or #) Nelson

Migration, Viking, and Christian art in Scandinavia from the 5th through the 15th centuries. Architecture, sculpture, painting, and metalwork.

5645. FOLK ARTS OF SCANDINAVIA. (4 cr; prereq one art history course or #; offered alt yrs) Nelson

Wood carving, metalwork, decorative painting, weaving, stitchery, 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 post-impressionist 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 9 cr art history 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 9 cr art history or #; offered alt yrs) Poor
Examination of Oriental art objects in local collections.

5774. THE ART OF ASIA: PERSPECTIVE AND PROBLEMS. (5 cr; prereq grad or #) Asher, Poor
Overview of art in India, China, and Japan through readings. Selected problems taught through lectures and journal articles representing various approaches to the history of art.

5775. EARLY INDIAN ART. (5 cr; prereq 4 cr of art history or #) 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 #) 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 #) Asher
Painting, beginning with the early tradition of mural painting; miniature painting from the 12th century onward.

5895. METHODS AND RESEARCH IN ART HISTORY. (4 cr, \$3895, \$8801; for highly qualified undergrad majors intending to pursue professional training and incoming MA majors; prereq art history sr major, #)
Types of analysis—formal, stylistic, iconographic, others. Techniques of research.

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 *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

5991. INTRODUCTION TO MUSEOLOGY. (4 cr; prereq sr or #) Haxthausen
Survey of the literature in museum studies and investigation of local museums, art centers, and historical societies.

Arts, Studio (Arts)

Staff—*Chair*, Wayne Potratz, 210 Art Building; *Director of Undergraduate Advising*, Gary Hallman, 224 Art Building; *Coordinator of Advising*, 204 Art Building (376-3219); *Director of Graduate Studies*, Guy Baldwin, 232 Art Building (373-5855)

Professors: Bethke, Hoard, MacKenzie (on leave 1985-88), Myers, Rose, Rowan
Associate Professors: Baldwin, Caglioti, Cowette, Feinberg, Gray, Hallman, Henkel (on leave 1986-87), Katsiaficas, Krepps, Lane, Lucey, Potratz, Roode
Assistant Professor: Lyon

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.

Major Requirements and Course Descriptions

Grades—All courses for the major, 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.

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, 1802, 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 concentration 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 CLA second 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 re-view, 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 program requirements is available at the department office.

Required Preparatory Courses—1101, 1301 or 1302, 1401, 1404, 1510 or 1520 or 1530 or 1540, 1701, 1802 or 1811 or 1812 (to be completed prior to application to B.F.A. program)

8 additional 1xxx studio arts cr (may be completed after admission to B.F.A. program)

Major Requirements—24 3xxx-5xxx cr in one studio arts specialization
16 additional 3xxx-5xxx studio arts cr
5400
16 art history cr; 8 cr must be at the 3xxx-5xxx level
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, Katsiaticas, Lyon, Roode, Rowan
Introduction to studio work; contemporary and traditional methods. Work from nature, various drawing mediums.

1102f,w,s,su. DRAWING II. (4 cr; prereq 1101)
Caglioti, Cowette, Feinberg, Gray, Katsiaticas, Lyon, Roode, Rowan
Work from life and nature; color and pictorial structure.

1301f,w,s,su. SCULPTURE. (4 cr) Baldwin, Potratz, Rose, Lucey
Structure; form and space. Direct construction in metal.

1302f,w,s,su. SCULPTURE. (4 cr) Baldwin, Potratz, Rose, Lucey
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, Katsiaticas, Lyon, Rowan
Color and its visual implications.

1510f,w,s,su. PRINTMAKING: INTAGLIO. (4 cr per qtr [8 cr max]) Myers
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.

1802f,w,s,su. INTRODUCTION TO GLASS-WORKING. (4 cr) Lane
Introduction to glassworking involving hot and cold working procedures.

1811f,w,s,su. CERAMICS: HANDBUILDING. (4 cr) Hoard, Lane
Introduction to hand-building techniques in clay for individual creative expression.

1812f,w,s,su. CERAMICS: WHEELTHROWING. (4 cr) Hoard, Lane
Introduction to wheel-throwing techniques for individual creative expression.

Intermediate Courses

3105f,w,s,su. PAINTING. (4 cr; prereq 1101, 1404 or #) Caglioti, Cowette, Feinberg, Gray, Katsiaticas, Lyon, Roode, Rowan
Introduction to studio work in painting. Fundamentals of visual art making via the paint media. Emphasis on visual language: volume, texture, color, line, space, light, composition.

3110f,w,s,su. DRAWING. (4 cr per qtr [12 cr max]; prereq 3105, 1401) Cowette, Caglioti, Feinberg, Gray, Katsiaticas, Lyon, Roode, Rowan
From model, still life, and nature. Principles of anatomy.

3120f,w,s,su. PAINTING. (4 cr per qtr [12 cr max]; prereq 1401, 3105) Cowette, Caglioti, Feinberg, Katsiaticas, Lyon, Roode, Rowan
Media and problems in painting. Individual projects.

3131f,w,s,su. NATURE OF ABSTRACTION. (4 cr; prereq 4 cr 3110, 1401) 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.)

3160f,w,s,su. WATERCOLOR. (4 cr per qtr [12 cr max]; prereq 1101, 1401, 1404 or #) Caglioti, Rowan
Transparent watercolor; gouache, casein, tempera. Figure, still life, landscape, abstract design.

3301f,w,s,su. SCULPTURE: DIRECT METAL. (4 cr; prereq 1301, 1302, 1401) Baldwin
Welding and brazing.

3302f,w,s. 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.

3303f,w,s,su. SCULPTURE: CAST METAL. (4 cr; prereq 1301, 1302, 1401) Potratz
Lost wax and sand casting in bronze, aluminum, and iron.

3304f,w,s,su. SCULPTURE: WOOD AND STONE. (4 cr; prereq 1301, 1302, 1401) Lucey
Wood and stone construction, assemblage, and arrangement.

3305f,w,s,su. SCULPTURE: KINETICS. (4 cr; prereq 1301, 1302, 1401) Baldwin
Constructions, kinetics, electronics.

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.

3510f,w,s,su. PRINTMAKING: INTAGLIO. (4 cr per qtr [12 cr max]; prereq 1401, 4 cr of 1510 or #) Myers
Intaglio techniques on metal and collagraph. Embossing.

3520f,w,s,su. PRINTMAKING: LITHOGRAPHY. (4 cr per qtr [12 cr max]; prereq 1401, 4 cr of 1520 or #) Krepps
Planographic techniques on stones and plates.

3530f,w,s,su. PRINTMAKING: RELIEF. (4 cr per qtr [12 cr max]; prereq 1401, 4 cr of 1530 or #) Bethke
Relief printing techniques; emphasis on color processes.

3540f,w,s,su. PRINTMAKING: SCREEN. (4 cr per qtr [12 cr max]; prereq 1401, 4 cr 1540 or #) Bethke, Krepps
Screen printing techniques, emphasis on color and image development.

3710f,w,s,su. PHOTOGRAPHY. (4 cr per qtr [12 cr max]; prereq 1401, 1701 or Jour 3301 or #) Hallman, Henkel
Photographic controls and processes. Related photo-sensitive media. Creative processes suited to individual interests.

3810f,w,s,su. INTERMEDIATE CERAMICS. (4 cr per qtr [12 cr max]; prereq 1401, 1811, 1812 or #) Hoard, Lane
Advanced design problems with introduction to glaze and clay experimentation. Emphasis on personal expression.

Major Requirements and Course Descriptions

3820f,w,s. GLASSWORKING. (4 cr per qtr; prereq 1401 and 1802) Lane
Glassworking, both hot and cold procedures. Emphasis on conceptual and aesthetic application of glass as an art medium.

Advanced Courses

5110f,w,s,su. DRAWING. (4 cr per qtr [16 cr max]; prereq 12 cr of 3110 or #) Caglioti, Cowette, Feinberg, Gray, Katsiaficas, 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 or #) Caglioti, Cowette, Feinberg, Katsiaficas, Lyon, Roode, Rowan
Various media. Individual problems.

5160f,w,s,su. WATERCOLOR. (4 cr per qtr [16 cr max]; prereq 12 cr of 3160 or #) Caglioti, Rowan
Watercolor techniques, aesthetic directions. Individual concepts and development of sensibilities.

5310f,w,s. SCULPTURE: DIRECT METAL. (4 cr per qtr [16 cr max]; prereq 3301) Baldwin

5320f,w,s. SCULPTURE: SPATIAL PROJECTS AND PROBLEMS. (4 cr per qtr [16 cr max]; prereq 3302) Rose
Physical relationships between sculptural objects, elements, and materials and how these can be manipulated to affect a space.

5330f,w,s. SCULPTURE: CAST METAL. (4 cr per qtr [16 cr max]; prereq 3303) Potratz
Lost wax and sand casting in bronze, aluminum, iron.

5340f,w,s. SCULPTURE: WOOD AND STONE. (4 cr per qtr [16 cr max]; prereq 3304) Lucey
Wood and stone construction, assemblage, and arrangement.

5350f,w,s. SCULPTURE: KINETICS. (4 cr per qtr [16 cr max]; prereq 3305) Baldwin
Constructions, kinetics, electronics.

5430. PAPER: PULP TO PLASTIC EXPRESSION. (4 cr per qtr [16 cr max]; prereq 12 cr 3430 or #) Krepps
Creative and traditional approaches to papermaking.

5510f,w,s,su. PRINTMAKING: INTAGLIO. (4 cr per qtr [16 cr max]; prereq 12 cr of 3510 or #) Myers
Color processes; intaglio and combined techniques.

5520f,w,s,su. PRINTMAKING: LITHOGRAPHY. (4 cr per qtr [16 cr max]; prereq 12 cr of 3520 or #) Krepps
Color printing and planographic techniques.

5530f,w,s,su. PRINTMAKING: RELIEF. (4 cr per qtr [16 cr max]; prereq 12 cr of 3530 or #) Bethke
Relief processes. Letterpress and combined techniques.

5540f,w,s,su. PRINTMAKING: SCREEN. (4 cr per qtr [16 cr max]; prereq 12 cr of 3540 or #) Bethke, Krepps
Screen processes and combined techniques.

5710f,w,s. PHOTOGRAPHY. (4 cr per qtr [16 cr max]; prereq 12 cr of 3710 or #) Hallman, Henkel
Individual work in photographic controls, processes; related photosensitive media.

5810f,w,s,su. CERAMICS. (4 cr per qtr [16 cr max]; prereq 12 cr of 3810 or #) Hoard, Lane
Aesthetic awareness and development; techniques and materials.

5820f,w,s. GLASSWORKING. (4 cr per qtr [16 cr max]; prereq 12 cr 3820 or #) Lane
Forming glass from molten state. Creative expression with technical understanding.

Advanced Entrance Courses

These courses, for advanced students only, are designed to 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 ArtS major, #)

3970. DIRECTED STUDIES. (1-5 cr per qtr [8 cr max]; prereq 24 cr in studio arts, #)
Guided individual work.

3980. DIRECTED INSTRUCTION. (1-5 cr per qtr [8 cr max]; prereq #)
Students assist in teaching courses they have completed.

5400. CONCEPTS IN CONTEMPORARY ART. (4 cr; prereq ArtS major or #)

5970. DIRECTED STUDIES. (1-5 cr per qtr [12 cr max]; prereq 24 studio arts cr, #)
Guided individual work.

Workshop Courses

When offered, area designation follows course number and title in the *Class Schedule* (e.g., ArtS 3420, Workshop: Ceramics).

1420. WORKSHOP. (1-5 cr per qtr)

3420. WORKSHOP. (1-5 cr per qtr)

5420. WORKSHOP. (1-5 cr per qtr)

Honors Courses

3601H. HONORS TUTORIAL. (2-4 cr; prereq honors candidate, #, Δ)

Individual consultation with faculty member on visual work, research project, presentations, or papers.

3602H. HONORS TUTORIAL. (2-4 cr; prereq honors candidate, #, Δ)

Individual consultation with faculty member on visual work, research project, presentations, or papers.

3603H. HONORS: INTERMEDIA 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.

3604H. HONORS: INTERMEDIA 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.

3605H. HONORS: THESIS. (2 cr; prereq honors candidate, #, Δ)

Advanced problems in studio and research. Exhibition.

3606H. HONORS: THESIS. (2 cr; prereq honors summa candidate, #3605H)

Research paper for summa candidates; must be taken concurrently with 3605H.

Astronomy (Ast)

Institute of Technology

Staff—Chair, T. W. Jones, 358 Physics; **Director of Graduate Studies**, L. Rudnick, 373 Physics; **Director of Undergraduate Studies**, R. C. Kennicutt, 353 Physics

Regents' Professor: Ney

Professors: Davidson, Gehrz, Humphreys, T. W. Jones, Stein, Woodward

Associate Professors: Kennicutt, Rudnick

Assistant Professors: Dickey, T. J. Jones

The activities of astronomy include observations of stars, interstellar matter, galaxies, and 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 the College of Liberal Arts. 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 non-majors. 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 or 1011; 1025 or 1015; Math 1211-1221-1231 or equiv; Physics 1271-1281-1291 or 1311-1321-1331-1341; 1275-1285-1295

Major Requirements—3051, 5162 and one other 5xxx-level astronomy course; Math 3211-3212-3213 or equiv; Physics 3011, 3511-3512-3513, 5021, 5023, 5024.

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, \$1021)

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.

Major Requirements and Course Descriptions

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 ASTRO-

PHYSICS. (4 cr; prereq 1011 or 1021H or equiv, #)

Current research problems in astronomy and astrophysics.

3010. FUNDAMENTAL CONCEPTS IN AS-

TRONOMY. (4 cr [0 cr for IT students], §3051; prereq Phys 1042 or equiv, 1011 or 1021H . . . 1015 or 1025H recommended)

Understanding the physical world through astronomy. The moon, planet, sun, and stars; their relationships. How astronomical information is obtained and how physical models result. Especially useful for science education majors and science writers.

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.

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 INTER-

STELLAR 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.

5321. RADIATION PROCESSES IN ASTRO-

PHYSICS. (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 majors.

Behavioral Biology

See Ecology and Behavioral Biology.

Bengali

See South and Southwest Asian Studies.

Biblical Studies

Staff—Chairs of Minor Committee,
Jonathan Paradise, 178 Klaeber Court
(373-5722)

Associate Professors: Paradise (Ancient Near Eastern and Jewish Studies), Daniel Reisman (Ancient Near Eastern and Jewish Studies), Tzvee Zahavy (Ancient Near Eastern and Jewish 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 Near and Middle Eastern Studies and Classical Studies.

Minor Sequence

Minor Requirements—Clas 3072; two courses from ANEJ 3501, 3502, 3505

One course from each of the following groups:

1. ANEJ 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*, Victor Bloomfield, 140 Gortner Laboratory of Biochemistry; *Director of Undergraduate Studies*, R. Glass, 258 Gortner Laboratory

Professors: Anderson, Bloomfield, Chapman, Glass, Gray, Kirkwood, Liener, Lovrien, Muenck, Nelsestuen, Rogers, Schlenk, Seal, Wood, C. Woodward
Associate Professors: Conti-Tronconi, Fuchs, Ugurbil

Assistant Professors: Bernlohr, Das, Sharrock, Schottel

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.

1301. ELEMENTARY BIOCHEMISTRY I. (5 cr, §Chem 1002 or 3301; not intended for majors; prereq Chem 1001 or 1005) Glass

The chemistry of carbon compounds that occur in nature. Composition, structures, and properties of the major components of plant, animal, and bacterial cells.

1302. ELEMENTARY BIOCHEMISTRY II. (3 cr; prereq 1301 or Chem 1002) Glass

Biochemical principles; reactions of organic compounds in the living cell. Metabolic pathways, energy considerations, and biosynthetic processes; emphasis on aspects essential to an understanding of plant and animal nutrition and physiology.

1303. ELEMENTARY BIOCHEMISTRY LABORATORY. (2 cr; prereq 1301 or Chem 1002)

Problems and exercises in chemical and biochemical techniques. Discussion of methods and concepts.

3960. RESEARCH TOPICS IN BIOCHEMISTRY.

(1 cr per qtr; offered S-N only) Glass

Lectures and discussions on current research in the department.

Biol 5001. BIOCHEMISTRY. (4 cr, §BioC 5001; 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 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 Biol 5001 or §Biol 5001)

Discussions of techniques and problem-solving approaches illustrated with laboratory experiments and demonstrations.

5525. PHYSICAL BIOCHEMISTRY: SOLUTION STRUCTURE AND INTERACTIONS OF BIOLOGICAL MACRO-MOLECULES. (4 cr, §MdBc 5525, §Chem 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 (formerly 5523). 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 (formerly 5523). PHYSICAL BIOCHEMISTRY: SPECTROSCOPIC METHODS II. (4 cr, §MdBc 5527, §Chem 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 (formerly 5524). PHYSICAL BIOCHEMISTRY: ENZYME KINETICS. (4 cr, §MdBc 5528, §Chem 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.

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.

Major Requirements and Course Descriptions

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 #)
Structure, function, metabolism, and metabolic regulation of components in biological systems.

5950. SPECIAL TOPICS. (1-5 cr per qtr; prereq #, Δ)

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

CLA students may take up to 16 credits of course work offered by other colleges. The credits may be applied toward CLA degrees, but may not be used to fulfill group distribution requirements. Descriptions of courses offered by the College of Biological Sciences may also 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—*Acting Dean*, Douglas C. Pratt, 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.

General Education—Courses especially appropriate for nonscience and nonbiology majors include BioC 1301, 1302, 1303; Biol 1008, 1009, 1101, 1102, 1103, 1106, 3051, 3112; Bot 1009, 1012; EBB 3001, 3111; GCB 3002, 3008, 3022.

B.A. Major Sequence

Required Preparatory Courses—1009 or exempt; Chem 1004-1005; Math 1211-1221-1231

With permission of the department of office, a two-quarter sequence in statistics (either Stat 5021-5022 or PubH 5450-5451-5452-5453) may be substituted for Math 1231.

Major Requirements—Chem 3301, 3302, 3305, 3306, and 4 additional chemistry cr

Phys 1104-1105-1106 with 1107-1108-1109, or 1271-1281-1291 with 1275-1285-1295; a two-qtr sequence in physics (1041-1045, 1042-1046) plus a course in mathematics, statistics, computer science, or physical science may be substituted with approval of the major adviser and the department office

3011, 3012, 5001, 5003, 5004, 5013, 5041

9 additional 3xxx-5xxx cr, including at least one course involving laboratory or field work in biological sciences (consult the *College of Biological Sciences Bulletin* for list of acceptable courses), and one of the following: Bot 3131, EBB 5156, GCB 5114 or 5134, MicB 5321. Courses from any of the following areas can be applied to the major: biochemistry, biology, botany, ecology and behavioral biology, genetics and cell biology, microbiology.

Major project: minimum of 4 cr in 5970 or 5990 taken in the biochemistry, botany, ecology and behavioral biology, genetics and cell biology, or microbiology departments.

The following courses are recommended to fulfill the upper division composition requirement: Comp 3015, Comp 3027, Rhet 3562, Rhet 3551.

Permission of the department is required for admission to the major.

Minor Sequence

Minor Requirements—Minimum of 15 3xxx-5xxx cr chosen from courses carrying the following designators: BioC, Biol, Bot, EBB, GCB, MicB, 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 Student Services office, 223 Snyder Hall.

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 primarily for honors students or their equivalent who plan to major in a life science discipline.

1009. GENERAL BIOLOGY. (5 cr, §1011)

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 chem or Δ)

For description, see 1009. Intended primarily for honors students or their equivalent who plan to major in a life science discipline.

1011. GENERAL BIOLOGY.

See 1009.

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) Fan, V Woodward
Principles of heredity and their social and cultural implications.

1102. MICROBES AND MAN. (4 cr)

Microorganisms in relationship to humans and their environment in the processing and preservation of food, waste disposal, and environmental factors; bacterial products of industrial and pharmaceutical importance; role of microorganisms in recycling elements of the biosphere; microorganisms and disease.

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)

Biesboer, Charvat, Wetmore
Levels of organization of plants, plant function, plant growth and development, plant reproduction.

1106. GENERAL ZOOLOGY. (5 cr; prereq 1009)

Schmid, Underhill
Survey of animal phyla; structure, function, behavior, adaptation, and evolutionary relationships.

1951, 1952, 1953. BIOLOGY COLLOQUIUM.

(1/1 or 2/1 or 2 cr; for prospective majors; S-N only; prereq 1009 or ∇ 1009)
Encourages and allows active participation in education. Provides an orientation to the biological sciences as well as interaction with other biology students and faculty members.

3011f,w,s,su. ANIMAL BIOLOGY. (5 cr, §1106;

prereq 1009, Chem 1005) Goldstein, Kerr, Rosenberg
Comparison of ways different phyla have solved similar physiological problems. Laboratory includes survey of major animal groups and physiological experiments.

3012w,s. PLANT BIOLOGY. (5 cr, §1103; prereq 1009, Chem 1005) Charvat, Koukkari, Wetmore
Plant diversity and evolution; structure and function of the plant cell and of the whole organism; growth and development of plants.

3042. FIELD PROBLEMS IN ECOLOGY. (2 cr; prereq 5041 or #)

Student research projects on selected ecological problems.

3051. BIOLOGY AND THE FUTURE OF MAN.

(4 cr; S-N only) Cunningham
Nontechnical discussion of biological factors affecting the quality of life; e.g., pollution, chemical and biological warfare, population growth, food supply, resource sufficiency, value of wilderness, genetics and eugenics, public health, aging, behavior control, and biological aspects of ethics, morals, and societal organization.

3111f,w,s,su. ANIMAL BIOLOGY. (4 cr, §3011;

prereq 1009, 1106, Chem 1005) Goldstein, Kerr, Rosenberg
Comparative physiology of animal groups; coordination, movement, support, excretion, reproduction.

3112. BIOLOGICAL RHYTHMS. (4 cr, §5112; prereq 1009 or #) Koukkari

Timing mechanisms and rhythms of organisms in physiological processes, ecological adaptation, and health; current hypotheses concerning their cellular and molecular nature.

3950H. UNDERGRADUATE SEMINAR. (2 cr per qtr; S-N only)

Each quarter different members of the faculty lead discussions of topics of current interest.

3960H. HONORS SEMINAR. (1 cr per qtr; S-N only; prereq Δ ; limited to participants in the CBS Honors Program)

Oral reports on topics of current interest to biologists; progress reports on laboratory and field research by participants.

3980. DIRECTED INSTRUCTION. (1-5 cr per qtr; prereq #; S-N only)**5001. BIOCHEMISTRY.** (4 cr, §BioC 5001; 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.

5003f,w,s,su. 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.

5004f,w,s,su. 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.

Major Requirements and Course Descriptions

5013. MICROBIOLOGY. (5 cr, \$MicB 3103, \$MicB 5105, \$VPB 3103; prereq 5001) Chapman, Dworkin, C Woodward

Taxonomy, anatomy, physiology, biochemistry, and ecology of microbes. Emphasis on molecular structure in relation to bacterial function.

BioC 5025. LABORATORY IN BIOCHEMISTRY. (2 cr; prereq Biol 5001 or #Biol 5001)

Discussions of techniques and problem-solving approaches illustrated with laboratory experiments and demonstrations.

5041. ECOLOGY. (4 cr; prereq Math 1142 or 1211, Biol 1103, 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.

5112. RHYTHMS AND CIRCADIAN REGULATION. (5 cr, \$3112; prereq 15 cr biology, 10 cr chemistry or #) Koukkari

For description, see 3112.

5125f,w,s. RECOMBINANT DNA LABORATORY. (4 cr; prereq #) Hackett, staff

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)

5951s. SOCIAL USES OF BIOLOGY. (4 cr; prereq 10 cr sciences; S-N only) Hooper, V Woodward

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.

5041. ECOLOGY. (4 cr; for summer session student should also register for 1 cr of 5890; limited to 20 students) Staff

Description available from department office.

5816. FIELD BIOLOGY PHOTOGRAPHY. (5 cr; prereq course in beginning biology, Δ ; limited to 20 students; A-F only)

5850. SPECIAL TOPICS IN BIOLOGY. (1-5 cr per qtr; prereq Δ) Staff

5890su. 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) Staff

Biometry (PubH)

School of Public Health

Staff—Head, Marcus O. Kjelsberg, 1226 Mayo Memorial Building; *Director of Undergraduate Studies,* Chap T. Le, 1240

Mayo Memorial Building

Professors: Boen, Goldman, Johnson, Kjelsberg

Associate Professors: Bartsch, Le

Assistant Professors: Connett, Neaton

Biometry, an interdisciplinary field in the biological and health sciences, interrelates biomedical statistics and health computer science in the study of quantitative concepts and research procedures of the life and health sciences.

Bioscience and health science research centers, pharmaceutical and related industries, and voluntary and governmental health agencies employ biometricians. A career as a professional biometrician normally requires graduate study, available at Minnesota and other universities.

B.A. Major Sequence

Required Preparatory Courses—Biol 1009; Chem 1004-1005; Math 1211-1221-1231 or 1311-1321-1331 or 1511-1521-1531 or 1611-1621

Major Requirements—5420, 5450, 5452, 5454, 5459; Math 3211, 3221 (or 3066, 3142); at least 10 credits chosen from 5431, 5432, Stat 5121-5122 (or 5131-5132-5133), 5211, 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 #) Staff
Guided individual reading or study.

5400. INTRODUCTION TO QUANTITATIVE METHODS IN THE HEALTH AND LIFE SCIENCES. (4 cr; for students majoring in biological and health sciences; prereq Biol 1009, Chem 1004-1005, Math 1111 or 1201 or #) Staff
Quantitative methods for the design and analysis of clinical and laboratory studies.

5420. STATISTICAL COMPUTING I: USING STATISTICAL PACKAGES. (3 cr; prereq PubH 5450 or #PubH 5450 or #)

The use of three popular statistical computer packages: SPSS, BMDP, and SAS for analysis of biomedical data using the CDC Cyber and IBM 4341 mainframe computers. File management capabilities of the packages. A case-study approach.

5431. BIOMEDICAL COMPUTING II. (4 cr; prereq 5430 or #) Staff

Further health-related applications of digital computers using FORTRAN. Computer organization; magnetic disk and tape file processing; sequential and hierarchical file management.

5432. BIOMEDICAL COMPUTING III. (4 cr; prereq 5431 or #) Staff

Survey of health information systems for inpatient, outpatient, and clinical research use, including status of current systems, costs and benefits, and legal/ethical considerations. System 2000 is used for class problems.

5450. BIOMETRY I. (4 cr; prereq familiarity with basic concepts of calculus or #) Jeffries

Probability models, including the binomial, Poisson and Gaussian, with applications in the biological and health sciences; hypothesis testing and interval estimation for the Gaussian model, using SPSS for computations.

5452. BIOMETRY II. (4 cr; prereq 5450) Jeffries

Inference for binomial and Poisson probability models, with health science applications; Chi square applied to frequency data; regression and correlation techniques, with applications in bioassay; one-way analysis of variance and multiple comparison techniques.

5454. BIOMETRY III. (4 cr; prereq 5452 or #) Le

Multiple regression and analysis of variance techniques for biological and health science data; including topics on model selection, randomized blocks, covariance, the relationship of regression and ANOVA. Use of SPSS computer package for analysis.

5456. BIOMETRY CONSULTING SEMINAR.

(Cr ar; prereq biometry major) Boen, staff
Consultant and client interaction: communication and formulation of the biometric problem. Role and responsibility of the biometrician. Robustness and relevance of frequently used analytical techniques. Biometry student internship experiences.

5459. INTRODUCTION TO MATHEMATICAL THEORY IN BIOMETRY. (3 cr; prereq 2 qtrs of calculus or #) Jeffries

Generating functions, curve fitting, iterative estimation, tests, propagation of error, and related topics. Illustrations from epidemics and population growth, bioassay, clinical trials, demography, and other biohealth science areas.

5460. DEMOGRAPHY AND HEALTH. (3 cr, §Soc 5561; prereq biometry or epidemiology majors or #) Staff

Demographic parameters of mortality, fertility, morbidity, and migration. Sources of demographic data in censuses, surveys, and registration systems. Refinement and adjustment of parameters by factor specification and standardization. Measurement of reproductivity and population change. Generation and current life tables. Stationary and stable population models. Population estimation and projection.

5462. CLINICAL TRIALS AND LIFE TABLE TECHNIQUES. (3 cr; prereq biometry or epidemiology major or #) Neaton

Methodology of large-scale collaborative clinical trials; case examples; operational aspects of a data center. Elementary life table techniques and application to follow-up studies in medicine and public health.

Botany (Bot)*College of Biological Sciences*

Staff—Head, Thomas K. Soulen, 220 Biological Sciences Center; *Director of Undergraduate Studies*, Thomas K. Soulen, 220 Biological Sciences Center; *Director of Graduate Studies*, Iris D. Charvat, 758 Biological Sciences Center
Professors: Frenkel, Koukari, McLaughlin, Morley, Pratt, Wetmore
Associate Professors: Biesboer, Charvat, Soulen

Assistant Professors: Gantt, Gleason, Olzewski, Wick

Botanists 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 and cellular basis of plant evolution and development; the mechanisms by which plants convert light into chemical energy; and the use of plants and their impact on human civilizations.

A major leading to the B.S. is available through the College of Biological Sciences.

General Education—Courses especially appropriate for nonmajors include Biol 1103 and Bot 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 botany, 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) Morley

Identification of the more common and conspicuous Minnesota plants with some discussion of their basic distinctions, life cycles, habitat requirements, distribution, and ecological relations. Lectures, demonstrations, six or seven field trips.

Major Requirements and Course Descriptions

- 1012s. PLANTS USEFUL TO HUMANS.** (4 cr; for majors or nonmajors) McLaughlin
Roles that plants have played in human biological and cultural development. Lectures and demonstration of material.
- Biol 1103w,s,su. 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) Koukkari, Wetmore
Levels of organization of plants, plant function, plant growth and development, plant reproduction.
- Biol 3012w,s. PLANT BIOLOGY.** (5 cr, §Biol 1103; prereq 1009, Chem 1005) Charvat, Wetmore
Plant diversity and evolution; structure and function of the plant cell and of the whole organism; growth and development of plants.
- 3109. PLANT ANATOMY.** (5 cr; prereq Biol 1103 or 3012) Biesboer
Structure and development of plants with special reference to vascular plants.
- 3131f,s. SURVEY OF PLANT PHYSIOLOGY.** (4 cr, §5131, §PIPh 3131, §PIPh 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶BioC 1302 or Biol 5001) Gleason, Soulen
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.
- 3201w. INTRODUCTORY TAXONOMY.** (4 cr; prereq Biol 1103 or 3012) Morley
Taxonomy of ferns, gymnosperms, and flowering plants (representative material drawn largely from Minnesota spring flora). Families of plants and their relationships; floral structure and function; taxonomic terms; nomenclature; literature; methods of collection and identification. Two or three field trips.
- 3950f,w,s,su. UNDERGRADUATE PROSEMINAR.** (1 cr per qtr; prereq #)
Biological topics of current interest.
- 5103f. BIOLOGY OF NONVASCULAR PLANTS.** (5 cr; prereq Biol 1103 or 3012; offered 1986-87 and alt years) McLaughlin
Algae, fungi, lichens, and bryophytes. 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.
- 5111w. PLANT CELL, TISSUE AND ORGAN DEVELOPMENT.** (5 cr; prereq Biol 1103 or 3012) Biesboer
Microscopic structure of vascular plants; development in root, stem, and leaf.
- 5131f,s. SURVEY OF PLANT PHYSIOLOGY.** (4 cr, §3131, §PIPh 3131, §PIPh 5131; prereq Biol 1103 or 3012, BioC 1302 or ¶BioC 1302 or Biol 5001) Gleason, Frenkel, Soulen
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. Includes a weekly discussion section.
- 5132f. PLANT PHYSIOLOGY LABORATORY.** (2 cr; prereq 3131 or 5131 or ¶3131 or ¶5131) Frenkel
Laboratory course to accompany 3131 or 5131.
- 5182s. 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.
- 5183w. WATER, MINERALS, AND TRANSLOCATION.** (4 cr, §PIPh 5183; prereq 5131 or equiv) Markhart
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.
- 5184f. PLANT GROWTH AND DEVELOPMENT.** (3 cr, §PIPh 5184; prereq 5131 or equiv) Hackett, staff
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, and how plant growth substances control these developmental events.
- 5211f. SURVEY OF ANGIOSPERM FAMILIES.** (5 cr; prereq 3201 or #; offered when feasible) Morley
Characteristics and relationships of orders and families of flowering plants on a worldwide basis.
- 5212f. PRINCIPLES OF ANGIOSPERM PHYLOGENY.** (3 cr; prereq 3201 or #; offered when feasible) Morley
Evolutionary relationships and the various means of judging them within the angiosperms. Laboratory investigation of representative and critical groups.
- 5231f. INTRODUCTION TO THE ALGAE.** (5 cr; prereq 10 cr in botany or biology or #; offered 1987-88 and alt yrs)
Structure, reproduction, and life histories of major algal divisions.

5235. ALGAL PHYSIOLOGY. (3 cr; prereq BioC 1302 or Biol 5001; offered 1987-88 and alt yrs)
Gleason
Photosynthesis, carbon metabolism, nitrogen fixation and assimilation, and secondary metabolism in algae. Algal genetics and the use of mutants in physiological studies. Algal interactions with environmental parameters and other organisms.

5960f,w,s,su. SPECIAL TOPICS. (Cr ar; prereq #, Δ) Staff
Treatment in depth of a specialized botanical topic.

5970. DIRECTED STUDIES. (Cr ar; prereq #, Δ) Staff
Study of selected topics with emphasis on readings and use of scientific literature.

5990. DIRECTED RESEARCH. (Cr ar; prereq #, Δ) Staff
Laboratory or field investigation of selected areas of research.

Courses Offered at Lake Itasca Forestry and Biological Station

See the *Summer Session Bulletin* for course descriptions.

5801su. PLAINS AND BOREAL FLORA. (5 cr; prereq course in taxonomy; offered annually)

5811su. FRESHWATER ALGAE. (5 cr; prereq 10 cr botany, biology or zoology; offered annually)

5821su. LICHENS. (5 cr; prereq 10 cr in botany or zoology or #, Δ ; offered when feasible)

5890. RESEARCH PROBLEMS. (1-5 cr per qtr; prereq Δ)

Cell Biology

See Genetics and Cell Biology.

Chemistry (Chem)

Institute of Technology

Staff—Chair, Louis H. Pignolet, 139 Smith Hall; *Academic Vice Chair*, Wilmer G. Miller

Professors: Almlöf, Bloomfield, Britton, Carr, Dahler, Davis, Ellis, Fenton, Gassman, Gentry, Gray, Hexter, Kreevoy, Leete, Lipsky, Lumry, Mead, L. Miller, W. Miller, Moscowitz, Noland, Pignolet, Prager, Reynolds, Swofford, Truhlar, Wilson

Associate Professors: Barany, Barbara, Conroy, Evans, Gladfelter, Hoyer, E.

Kariv-Miller, Mann, Que

Assistant Professors: Etter, Kass, D. Leopold, K. Leopold, Liu, Livinghouse, Lodge, Stankovich

Adjunct Faculty—*Associate Professors:* Heilman, Rasmussen

The Department of Chemistry offers a program leading to the B.A. degree in the College of Liberal Arts and one leading to the Bachelor of Chemistry (B. Chem.) degree in the Institute of Technology. Information about the B.Chem. program may be found in the *Institute of Technology Bulletin*. If you are a premedical chemistry major, you should consult with a chemistry adviser in the chemistry advising office (624-8008) for information about a recommended curriculum.

For Students Taking Beginning Courses—Many beginning chemistry courses require high school chemistry and mathematics. Consult individual course descriptions.

If you are planning to major in chemistry, you should take 1031 if your high school chemistry background is strong. Otherwise you should take 1004. Consult your adviser before making this choice.

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—1031-1032 or 1004-1005 if necessary, 1133; Math 1231

Major Requirements—3331, 3332, 3333, 3335, 3336, 5133, 5134, 5533, 5534, 5535, 5536, 5538, 5731, 5732, 5734, 5735
Math 1211-1221-1231, 3211, 3221
Phys 1271-1281-1291, 1275-1285-1295
Major project: 2-cr (minimum) research project, Chem 5900, 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.

Major Requirements and Course Descriptions

1001-1002†. CHEMICAL PRINCIPLES AND COVALENT SYSTEMS. (5 cr per qtr, §1003, §1004-1005, §1008, §1031-1032; BioC 1301 is an alternative to 1002 for some students; primarily for forestry and nursing students; all IT students excluded without special permission; a terminal course; prereq 2 yrs high school mathematics...1 yr high school chemistry recommended; 4 lect, 1 rec, and one 3-hr lab per wk) Principles of chemical change; structural concepts of nuclei, atoms, molecules; laws of dynamic behavior of matter; equilibrium concepts, especially those relevant to living systems; application of principles with emphasis on organic and biological species.

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, and 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.

1004-1005†. GENERAL PRINCIPLES OF CHEMISTRY. (5 cr per qtr, §1001-1002, §1031-1032; for non-chemistry majors; prereq 1 yr high school chemistry or equiv, 4 hrs high school mathematics, placement index of Y or predicted mathematics GPA 1.90 on ACT or Math 0009 or college course in algebra...high school physics recommended; 4 lect, 1 rec, and one 3-hr lab per wk) Chemistry from the standpoint of atomic structure; periodic properties of elements and compounds derivable from structural considerations; laws of behavior of matter, theories of solutions, acids, bases, and equilibrium.

1006. PRINCIPLES OF SOLUTION CHEMISTRY. (4 cr; prereq 1005 or 1032; 3 lect and one 4-hr lab per wk) Chemistry of selected cations and anions. Detection methods—spectrophotometric, potentiometric, and chromatographic procedures. Metal ion studies including systematics; acid-base principles; influence on the environment; importance in biological systems; formation and stereochemistry of complexes.

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.

1031-1032†. CHEMICAL PRINCIPLES I AND II. (5 cr per qtr, §1001-1002, §1004-1005; prereq 1 yr high school chemistry, 4 yrs high school mathematics, placement index of Y or predicted mathematics GPA 1.90 on ACT or Math 0009 or college course in algebra, chemistry or chemical engineering major or #...high school physics recommended; 4 lect, 1 lab recitation and one 3-hr lab per wk) Stoichiometry, development and use of structural concepts, energetics, geometry of molecules, bonding, the behavior of gaseous and liquid states. The solid state, theory of solutions, equilibrium, gas and condensed phases, behavior and nature of the solution process, acids and bases.

1032H. HONORS CHEMICAL PRINCIPLES II: LABORATORY. (1 cr; prereq §1031 and #) Honors laboratory section to take the place of the laboratory in 1032. Includes sophisticated and open-ended chemical experiments for high-achieving students.

1133. ELEMENTARY QUANTITATIVE ANALYSIS. (5 cr; prereq 1032; 3 lect hrs, two 4-hr labs per wk) Theory and practice of chemical methods of analysis.

3100. QUANTITATIVE ANALYSIS LECTURE. (3 cr, 3100-3101†; for non-chemistry majors; prereq 1005 or 1032) 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; for non-chemistry majors; prereq 1005 or 1032 or equiv; 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; 1 lab conf, 4 lab hrs per wk) Continuation of 3305.

3331. INTRODUCTORY ORGANIC CHEMISTRY I. (5 cr, §3301; for chemistry and chemical engineering majors; prereq 1133 or 1 yr college chemistry; 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 is recommended]; two 4-hr labs per wk)
Laboratory to accompany 3332.

3336. INTRODUCTORY ORGANIC CHEMISTRY III LABORATORY. (2 cr; prereq 3333 or 3333 [3333 is recommended]; two 4-hr labs per wk)
Laboratory to accompany 3333.

3335H-3336H⁺. HONORS INTRODUCTORY ORGANIC CHEMISTRY II LAB. (2 cr per qtr; prereq 3332 or 3332 and #; chemistry, chemical engineering, biochemistry majors only)
An honors laboratory section to accompany 3332.

3499. SENIOR THESIS. (Cr ar; prereq 4th yr, #)
Written final senior thesis report.

3970. DIRECTED STUDIES. (Cr ar; prereq #)
Faculty-guided individual learning experience on or off campus 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.

5001-5002. CHEMISTRY CONCEPTS FOR JUNIOR HIGH TEACHERS. (4 cr per qtr; prereq college-level general chemistry, experience teaching secondary school or #; restricted to secondary school teachers or education students)
Chemistry fundamentals to expand the resources of junior high school chemistry teachers. Demonstration of chemical ideas by experiments and selection of chemistry topics appropriate for students at the junior high school level.

5122. ADVANCED ANALYTICAL CHEMISTRY. (4 cr; prereq 1 yr organic chemistry and course in thermodynamics)
Equilibria in aqueous and nonaqueous systems.

5126. MODERN ANALYTICAL CHEMISTRY. (4 cr; prereq chemical engineering major, 3332 and 3335; 2 lect hrs, two 3-hr labs per wk)
Strategies and techniques for solving modern analytical problems. Use of modern instruments in analysis.

5127. ANALOG INSTRUMENTATION. (5 cr; prereq chemistry major or grad, Phys 1291, Math 1231 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.

5134. CHEMICAL INSTRUMENTATION AND ANALYSIS LABORATORY. (2 cr; prereq 5133; two 4-hr labs per wk)
Application of spectroscopic methods of analysis (visible, UV, IR, atomic absorption, and flame emission), electrochemical methods of analysis (potentiometry, polarography, and anodic stripping), and separation methods of analysis (gas chromatography, liquid-liquid chromatography, and extraction).

5139. CHROMATOGRAPHY AND SEPARATION SCIENCE. (3 cr without lab, 4 cr with lab; 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.

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.

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.

5305. INTERMEDIATE ORGANIC CHEMISTRY. (4 cr; prereq 3303 or 3333 or equiv; 3 lect and 1 rec hrs per wk)
Physical organic chemistry, with applications to typical chemistry problems. Reactions of typical functional groups; modern laboratory methods of organic synthesis.

5309. APPLICATIONS OF MOLECULAR ORBITAL THEORY IN ORGANIC CHEMISTRY. (4 cr; prereq 5536 or Phys 3501 or #)
Application of quantum mechanics to organic reactions and photochemistry.

Major Requirements and Course Descriptions

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.

5343. CHEMISTRY OF NATURAL PRODUCTS

(STEROIDS). (3 cr; prereq 3303 or 3333 or equiv; offered when demand warrants)
Steroidal hormones, their isolation, proof of structure, synthesis, and action.

5344. HETEROCYCLIC COMPOUNDS. (3 cr; pre-

req 3303 or 3333 or equiv; offered when demand warrants)
Typical classes of heterocyclic compounds, their chemical and physical properties and uses. Synthesis.

5365. ORGANIC QUALITATIVE ANALYSIS.

(4 cr; prereq 3303 or 3333 or equiv; 8 lab and 2 conf hrs per wk)
Reactions of typical functional groups; methods of organic structure determination.

5520-5521. ELEMENTARY PHYSICAL CHEM-

ISTRY. (3 cr per qtr; prereq 1 yr college chemistry, Math 3211, Phys 1291 or 1106 or *Phys 1291)
General survey. 5520: Chemical thermodynamics. 5521: Kinetics, statistical mechanics, structure.

5533. QUANTUM CHEMISTRY. (4 cr; prereq 1 yr

college chemistry, Phys 1291 or *Phys 1291, or Phys 1106 with #, Math 3211)
Principles of quantum mechanics; applications to atomic and molecular structure and to spectroscopy.

5534. CHEMICAL THERMODYNAMICS. (4 cr;

prereq IT upper div or CLA chem major or Δ , Math 3211, Phys 1291 or *Phys 1291, or Phys 1106 with #)
Principles of thermodynamics; application to chemical systems.

5535. STATISTICAL MECHANICS AND REAC-

TION 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.

5536. QUANTUM CHEMISTRY LABORATORY.

(2 cr; prereq 5533 or *5533)
Experiments illustrating quantum mechanical principles and methods.

5538. PHYSICAL CHEMISTRY LABORATORY.

(1 cr; prereq 5535 or *5535)
Experiments in thermodynamics and reaction kinetics.

5580. PHYSICAL CHEMISTRY OF POLYMERS.

(3 cr; prereq 5534 or 5535 or #; offered alt yrs)
Molecular weight distribution, statistical mechanics of polymer solutions, network polymers, viscosity, light scattering, viscoelastic behavior.

5610. POLYMER SCIENCE. (4 cr, \$8610, \$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 maj)
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. TRANSITIONS METAL INORGANIC

CHEMISTRY. (3 cr; prereq 5533 or 5534 or *5533 or *5534, chemistry or chemical engineering maj)
Emphasis on transition metal compounds where d electrons are important. Topics of current interest such as organometallic, bioinorganic, and metal cluster chemistry.

5734. MAIN GROUP INORGANIC CHEMISTRY

LABORATORY. (2 cr; prereq *5731 or 5731, chemistry or chemical engineering maj; 1 lect, 3 lab hrs per wk)
Laboratory to accompany 5731.

5735. TRANSITION METAL INORGANIC

CHEMISTRY LABORATORY. (2 cr; prereq *5732 or 5732, 5734, chemistry or chemical engineering maj; 1 lect, 3 lab hrs per wk)
Laboratory to accompany 5732.

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 #)
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.

5763. SURVEY OF THE CHEMISTRY OF THE NONTRANSITION ELEMENTS. (4 cr; prereq 5732 or equiv or #)

Reactions and properties of the nontransition elements, including the rare gases, and their compounds.

5803. THE CHEMISTRY OF INDUSTRY. (4 cr; prereq chemistry sr or grad student 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.

5900. STUDIES IN CHEMISTRY. (2 cr; prereq CLA chemistry major, jr or sr, #)

Readings in current chemical literature under faculty guidance. Written report required.

5991, 5992, 5993. SELECTED TOPICS IN CHEMISTRY. (Cr ar; prereq Δ , sr)

Topics of current interest. Consult department for details for a particular quarter.

Chicano Studies (Chic)

Staff—*Chair*, Guillermo Rojas, 483 Ford Hall

Assistant Professor: Valdés

The department offers an interdisciplinary program leading to a major and minor in Chicano studies. Courses are designed for students interested in the social, historical, and cultural experience of the Mexican population in the United States. The core courses introduce the student to the historical and literary methodologies while exploring the seminal 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.

B.A. Major Sequence**Required Preparatory Courses**—

1105, 1106, 1107; Span 1101, 1102, 1103 or equiv (proficiency test required or documented 3 years of high school Spanish).

Major Requirements—28 cr selected from 3212, 3213, 3330, 3427, 3428, 3441, 3442, 3507, 3508, 3510, 3511, 3615, 3617, 3711, 3712

16 additional cr in 3xxx-level courses (appropriate courses from other departments accepted with approval of adviser)

Major project: essay completed in 5970 (at least 3 cr)

Minor Sequence

Required Preparatory Courses—Minimum of two courses from the following: 1105, 1106, 1107

Minor Requirements—16 cr in 3xxx- or 5xxx-level courses selected with approval of adviser

1105f. 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.

1106w. 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.

1107s. 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.

3115s. LATINOS IN EDUCATION. (4 cr)

Social, cultural, and professional issues encountered by the Spanish-speaking and other minorities in pursuit of opportunities in higher education.

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.

3330. CHICANO TOPICS. (4 cr per qtr [12 cr max])

Aspects of Chicano, Latino, or Hispanic topics in areas such as history, sociology, anthropology, linguistics, and drama.

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.

Major Requirements and Course Descriptions

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.

3510. CHICANO LITERATURE: TOPICS. (4 cr per qtr [12 cr max]; prereq 3507 or 3508 or #...some knowledge of Spanish recommended)
New dimensions in Chicano literature; prominent themes, figures, tendencies, trends.

3511. CHICANO LITERATURE: TEXT AND CONTEXT. (4 cr)
Fiction, poetry, and theater by contemporary Chicano writers.

3615. CONTEMPORARY CHICANO PARTICIPATION IN POLITICS. (4 cr)
Recent and contemporary Chicano political activities, organizations, and personalities; their social impact.

3617. THE CHICANOS AS A NATIONAL MINORITY. (4 cr)
Chicanos as a national minority from historical and cultural socioeconomic perspectives.

3711. CHICANOS: SOCIOLOGICAL PERSPECTIVES I. (4 cr)
Sociological studies of Chicanos.

3712. CHICANOS: PSYCHOLOGICAL PERSPECTIVES II. (4 cr; prereq 3711 or #)
Psychological studies of Chicanos.

3970f,w,s,su. DIRECTED STUDIES. (Cr ar; prereq #)
Guided individual reading or study.

5970. DIRECTED STUDIES. (Cr ar; prereq #)
Guided individual reading or study.

Child Psychology (CPsy)

Staff—*Director*, W. Andrew Collins, 196 Child Development; *Director of Graduate Studies*, Herbert L. Pick, 206b Child Development; *Director of Undergraduate Studies*, William R. Charlesworth, 186 Child Development; *Departmental Honors Adviser*, James Morgan, 206c Child Development

Professors: Charlesworth, Collins, Hartup, Maratsos, Moore, A. Pick, H. Pick, Sroufe, Tapp, Yonas

Associate Professor: Gunnar

Assistant Professors: Breslow, Masten, Morgan, Nelson

Lecturers: Galle, Mooney-McLoone, Murphy, Weigand

Adjunct Faculty—Egeland (Educational Psychology), Garmezy (Psychology), Turnure (Educational Psychology), Weinberg (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 College of Liberal Arts courses; they count toward the College of Liberal Arts 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, 3302, 3303/5303, 3304, 3309, 3332, and 5301 deal with general education subject matter that is often of interest to students in other concentrations.

B.A. Major Sequence

Required Preparatory Courses—1301; Psy 1001, 1004

Major Requirements—3308 or Psy 1005; Psy 3801 or equiv; 3331 or 5331, 3343

One course from 3302, 3303 or 5303, 3304

Two courses from 3311 or 5311, 3313, or 5313, 3332, 5315, 5319, 5329, 5333, 5334, 5335, 5339, 5341, 5345, 5349

Senior Project: 3960

Minimum of 8 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.

B.S. Major Sequence

Required Preparatory Courses—1301; Psy 1001, 1004

Major Requirements—12-13 cr to include 3308, Psy 3801, Soc 5821 or EPsy 5240, Soc 3811 or EPsy 5281

8 cr from 3331 or 5331 and 3343

8 cr from 3330 and 5334

8 cr from 3302, 3303 or 5303, and 3304

4 cr from 5341, 5343, 5345, 5349

4 cr from 3332, 5329, 5333, 5335, 5339

8 cr from 3311 or 5311, 3313 or 5313,

5315, 5319

4 cr from Senior Project: 3960

4 cr from 3xxx- or 5xxx-level CPsy courses which may include 3980, 5970, 5990 (only 4 cr of each course may be counted toward the major)

22-24 credits from supporting field courses (list available from department)

Minor Sequence

Required Preparatory Courses—1301; Psy 1001

Minor Requirements—3302 or 3303 or 5303 or 3304

One course from 3331 or 5331, 3332, 3343, 5329, 5341, 5343, 5345, 5349

One course from 3311 or 5311, 3313 or 5313, 5315, 5319, 5333, 5334, 5335, 5339

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.

3302. 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.

3303f,w,s,su. ADOLESCENT PSYCHOLOGY.

(4 cr, \$5303; prereq 5 cr introductory psychology)

Physical, cognitive, and social development during adolescence.

3304. 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.

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.

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.

Major Requirements and Course Descriptions

3311f,s,su. BEHAVIORAL AND EMOTIONAL PROBLEMS. (4 cr, §5311; prereq 1301 or equiv)
Description, etiology, development of behavioral and emotional problems of children; treatment where germane. Does not include problems deriving primarily from sensory or physical handicap, mental retardation, or neurological impairment.

3313. 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.

3330. DIRECTED EXPERIENCES. (1-4 cr per qtr; 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. PROCESSES OF SOCIALIZATION OF CHILDREN. (4 cr, §5331; prereq 1301 or equiv)
Processes of social learning: identification, social influence, imitation, reward and punishment, internalization, and object choice.

3332. 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.

3343. INTRODUCTION TO COGNITIVE DEVELOPMENT. (4 cr; prereq 1301)
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 I: CURRENT RESEARCH IN DEVELOPMENTAL PSYCHOLOGY. (4 cr; primarily for child psychology majors; prereq 1301 or equiv, #)
Introduction to ongoing research programs, preparation for independent research (thesis research if honors major), discussion of career opportunities, other topics. Open to all students; required for honors majors. Normally taken in junior year.

3361H. HONORS SEMINAR II: RESEARCH AND THEORY IN DEVELOPMENTAL PSYCHOLOGY. (4 cr; primarily for child psychology majors; prereq 1301 or equiv, #)
History, theory, and systems of research in developmental psychology; interpreting recurring issues. Open to all students; required of honors majors. Normally taken in senior year.

3960. SENIOR PROJECT IN CHILD PSYCHOLOGY. (1-4 cr [4 cr max]; prereq 1301, #; S-N only)
A 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; prereq #)
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 non-majors)
Theory and research in child development with emphasis on perception, language, learning, cognition, personality, and social development.

5303f,w,s,su. ADOLESCENT PSYCHOLOGY. (4 cr, §3303; prereq 5 cr introductory psychology)
For description, see 3303.

5305. MULTIDISCIPLINARY PERSPECTIVES ON AGING. (4 cr, §Educ 5440, §HSU 5009, §PA 5671, §SW 5010, §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. BEHAVIORAL AND EMOTIONAL PROBLEMS. (4 cr, §3311; prereq 1301 or equiv)
For description, see 3311.

5313. PSYCHOLOGY OF ATYPICAL CHILDREN. (4 cr, §3313; prereq 1301 or equiv)
For description, see 3313.

5315. INTRODUCTION TO MENTAL RETARDATION. (4 cr, §EPsy 5620; prereq 1301 or equiv)
Psychological and educational problems related to the mentally retarded.

5319. CLINICAL PROCEDURES WITH CHILDREN AND YOUTH. (4 cr; prereq 12 cr in psychology, educational psychology, 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.

5329. GENETICS, ETHOLOGY, AND DEVELOPMENT. (4 cr; prereq 1301 or equiv; offered alt yrs)
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.

5331f,w,s,su. PROCESSES OF SOCIALIZATION OF CHILDREN. (4 cr, §3331; prereq 1301 or equiv)
For description, see 3331.

5333. PERSONALITY DEVELOPMENT. (4 cr; prereq 3331 or 5331)
Psychoanalytic and behavioral theory formulations, related research literature in content areas (e.g., attachment, dependency, aggression, competence, sex typing).

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).

5335. PEER RELATIONS. (4 cr; prereq 3331 or 5331; offered alt yrs)

Peer influences, social interactions and relations; developmental changes.

5339. PARENT-CHILD RELATIONS. (4 cr; prereq 3331 or 5331)

Parent-child relationships and evaluation of research in areas including cross-cultural child-rearing perspectives, alternative parenting roles, economics of parent-child relations, and rights of parents and children.

5341. PERCEPTUAL DEVELOPMENT. (4 cr; prereq 1301 or #)

Perceptual learning and the development of sensory and perceptual processes.

5343. COGNITIVE DEVELOPMENT. (4 cr; prereq 1301 or #)

Cognitive processes; relevant theory, research literature, and methodology.

5345. LANGUAGE DEVELOPMENT. (4 cr; prereq 1301 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 grad students; 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 East Asian Studies.

Classical Civilization (CLCv)

Staff—Chair, Thomas Clayton, 304a Folwell Hall

Faculty—Akehurst (French and Italian), Aris (Chemical Engineering and Materials Science), Beck (Educational Policy Studies and Administration), Belfiore

(Classical Studies), Cooper (Art History), Jones (Regents' Professor Emeritus, History), Kelly (History), McDonald (Classical Studies), Peterson (Philosophy), Sibley (Professor Emeritus, Political Science), Sonkowsky (Classical Studies), Spencer (Anthropology), Tracy (History), Wilson (History of Medicine)

This undergraduate interdisciplinary program focuses on the study of Greek and Roman cultures and their influence on Western civilization. Its 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 Manual*, available in the Classical Civilization office, 304a Folwell Hall. Proseminars and other courses are offered annually.

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 courses.

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—CLA language requirement in Greek or Latin

Minor Requirements—15-25 cr in approved courses at the 3xxx level (one course from each of the four designated areas required for the major) selected with guidance of faculty adviser.

Major Requirements and Course Descriptions

3340. PRACTICUM IN ARCHAEOLOGICAL FIELD TECHNIQUES. (4 cr; prereq classical civilization major or #, one course in ancient art or archaeology) Cooper

Excavation methods for classical sites. Class meets at a selected Minnesota site for day-long sessions for one-half quarter. Use of field procedures including handling of instruments, setting up field notebooks, preparation of trenches, excavation, and recording and analysis of strata and artifacts.

3510. GREAT BOOKS. (4 cr; prereq jr, sr or #) Staff
Intensive study of major works of classical antiquity and after, written in or translated into English, related by kind, theme, or perspective, sometimes including works from non-western cultures.

3940. PROSEMINAR: CLASSICAL TRADITIONS IN WESTERN CULTURE. (4 cr; prereq #)
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.

3970. 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.

Classical Studies

Staff—Chair, William Coulson; *Director of Language Instruction,* Philip Sellw; *Director of Undergraduate Studies,* Elizabeth Belfiore; *Director of Graduate Studies,* Robert Sonkowsky

Regents' Professor Emeritus: McDonald
Regents' Professor: Aris

Professors: Clayton, Cooper, Erickson, Hershbell, Kelly, Keuls, McNally, Sonkowsky, Stavrou

Associate Professors: Belfiore, Coulson, Peterson

Assistant Professors: Nicholson, Sellw

Classical studies deals with the study of the human experience of ancient Greece and Rome. It encompasses prehistoric time as well as the interrelationships between classical culture and the ancient Near East and Minoan-Mycenaean civilizations. Classical studies also embraces Greek and Latin studies in the medieval,

Renaissance, and modern periods. Greek and Latin literature and archaeological and artistic remains are studied from humanistic perspectives in various fields: literature, philology, metrics, oral reading, rhetoric and poetics, archaeology, mythology, religion, philosophy, art criticism, and daily life.

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 Greek or Latin.

Major programs are offered in Greek, Latin, Greek-Latin, Greek-Philosophy, and classical civilization (interdepartmental). If you wish to undertake advanced work in both languages or design double majors, you should consult the department early to plan a program. Courses in classical studies may form part of any of the four majors.

B.A. Major Sequence—Greek-Latin

Required Preparatory Courses—Grk 1104 or 1122 or 3052 or equiv and Δ

Lat 1104 or 1122 or 3052 or four years high school Latin or equiv (students with three years high school Latin should enter 1104; with four years, any 3xxx course above 3052); one "age" course selected from Clas 1001-1006

Major Requirements—25 cr in either Greek or Latin courses above 3052, according to the student's concentration preference

Major project (Grk or Lat 3951)
15 cr in courses above 3052 in the language on which concentration is not placed

15 additional cr in 3xxx-5xxx courses in related subjects (e.g., ancient history and religions, ancient art history, Greek and Roman archaeology, Greek and Latin literature in translation) selected in consultation with the director of undergraduate studies

No more than two 31xx courses in each language and no more than 5 cr in Grk 3120 may be applied to the major. Clas 3046, may not be applied to the major.

All major and minor programs must be approved by the student's adviser and the director of undergraduate studies. All courses taken for the major requirement must be taken on an A-F basis. No major or minor credit will be given for a course in which a student receives a D.

B.A. Major Sequence—Greek

Required Preparatory Courses—1104 or 1122 or 3052 or equiv and Δ; one "age" course selected from Clas 1001-1003

Major Requirements—25 cr in Greek courses above 3052

15 additional cr in 3xxx-5xxx classics courses, or related courses in other departments selected in consultation with the director of undergraduate studies

Major project: 3951

No more than two Grk 31xx courses and no more than 5 cr in 3120 may be applied to the major. Clas 3046, may not be applied to the major.

Minor Sequence—Greek

Required Preparatory Courses—1104 or 1122 or 3052; one "age" course selected from Clas 1001-1003

Minor Requirements—10 cr in Greek courses above 3052

5 cr in Greek courses above 3052, or in 3xxx-5xxx classics courses

No more than one Grk 31xx courses and no more than 5 cr in 3120 may be applied to the minor. Clas 3046, may not be applied to the minor.

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 "age" course selected from Clas 1004-1006

Major Requirements—25 cr in Latin courses above 3052

15 additional cr in 3xxx-5xxx classics courses, or related courses in other departments selected in consultation with the director of undergraduate studies

Major project: 3951

No more than two Lat 31xx courses may be applied to the major. Clas 3046, may not be applied to the major.

Minor Sequence—Latin

Required Preparatory Courses—1104 or 1122 or 3052 or four yrs high school Latin; one "age" course selected from Clas 1004-1006

Minor Requirements—10 cr in Latin courses above 3052

5 cr in Latin courses above 3052, or in 3xxx-5xxx classics courses

No more than one Lat 31xx course may be applied to the minor. Clas 3046, may not be applied to the minor.

B.A. Major Sequence—Greek-Philosophy

Required Preparatory Courses—Greek 1104 or 1122 or 3052 or equiv and Δ; one "Age" course (i.e., Clas 1001-1003); Phil 1001 or 3201

Major Requirements—10 cr in Greek courses numbered above 3052; 10 additional cr in Greek courses numbered above 3052 or in Class 5020, 5085, 5086, 5960

Phil 3001, 3105 or 3311, any two courses in ancient philosophy from Phil 3005, 5004, 5005, 5008, 5302, 5760 or 5770 (when these courses are on topics in ancient philosophy)

Major Project: 4-5 cr to be completed in consultation with advisers from the departments of philosophy and classical studies, either in Grk 3951 or through a major project in a philosophy course. No more than one Grk 31xx course will apply; Clas 3046 will not apply.

Major Requirements and Course Descriptions

Greek (Grk)

1101f-1102w. BEGINNING CLASSICAL GREEK. (5 cr per qtr, §3051-3052; prereq 1101 or equiv for 1102)

1103s. SELECTIONS FROM GREEK LITERATURE. (5 cr, §3051-3052; prereq 1102 or equiv)
Prose and poetry.

1104f. GREEK PROSE. (5 cr, §3051-3052; prereq 1103 or 2 yrs high school Greek or Δ)
Selections from Lysias and/or Plato.

1111f, 1122w. HONORS COURSE: BEGINNING CLASSICAL GREEK. (5 cr per qtr; prereq regis in honors program or high ability as indicated by college entrance records)

1120. 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.

3051f-3052w. BEGINNING ANCIENT GREEK: ACCELERATED. (5 cr per qtr, §1101-1102, §1103, §1104; previous experience in another foreign language desirable)

3105w. GREEK DRAMA. (5 cr; prereq 1104 or Δ)
Euripides.

3106s. 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.

3951. MAJOR PROJECT. (5 cr; prereq Grk-Lat or Grk major, three 3xxx courses in Greek or #)
Research paper utilizing 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.

3960. HONORS TUTORIAL. (5 cr per qtr; prereq Δ)

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq #, Δ)
Guided individual reading or study.

5012. PROSE COMPOSITION. (4 cr; prereq 3106 or Δ)

5121. BIBLICAL AND PATRISTIC GREEK. (4 cr; prereq 3106 or 3120 or Δ)
Septuagint, Philo, Josephus, New Testament, Apostolic Fathers, and other patristic literature to 5th century. Reading and discussion of selected texts in the major genres.

5310, 5320, 5330, 5340, 5350, 5360, 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. *5390:* Romance.

5715. INTRODUCTION TO CLASSICAL PHILOLOGY. (4 cr, §Lat 5715; prereq #)

Historical grammar of Greek and Latin from their Indo-European origin to the classical norms.

5716. HISTORY OF GREEK. (4 cr; prereq Grk or Lat 5715 or equiv, 2 yrs Greek)

Reading and analysis of documents illustrating the evolution of the Greek language from Mycenaean to modern times.

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)

Greek-Modern (MdGk)

1101-1102-1103. BEGINNING MODERN GREEK. (5 cr per qtr, §FoSt 3001-3002-3003; prereq 1101 or equiv for 1102...1102 or equiv for 1103)
Speaking and reading demotic Greek. Pattern-practice drill, simple readings, grammar.

1104-1105-106. INTERMEDIATE MODERN GREEK. (5 cr per qtr, §FoSt 3004-3005-3006)
Fundamentals of syntax through a variety of readings from Modern Greek prose writers and poets. Additional grammatical study through readings, conversation, and composition.

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq # and Δ)
Guided individual reading or study.

5970. DIRECTED STUDIES. (1-5 cr per qtr; prereq # and Δ)
Guided individual reading or study.

5980. DIRECTED INSTRUCTION. (Cr ar; prereq # and Δ)

5990. DIRECTED RESEARCH. (Cr ar)

Latin (Lat)

1101f-1102w. BEGINNING LATIN. (5 cr per qtr; prereq 1101 or equiv for 1102)

1103s. SELECTIONS FROM LATIN LITERATURE. (5 cr, §3051-3052; prereq 1102 or equiv)
Prose and poetry.

1104f. LATIN PROSE. (5 cr; prereq 1103 or 3 yrs high school Latin or Δ)
Selections from Caesar and Cicero.

1111f-1122w. HONORS COURSE: BEGINNING LATIN. (5 cr per qtr; prereq regis in honors program or high ability as indicated by college entrance records)

3001su. BEGINNING LATIN: INTENSIVE ACCELERATED. (10 cr, §1101-1102, §1103, §3051-3052)
Ten class hours weekly, plus individual and small group sessions. Grammar, syntax, composition, and reading.

3051f-3052w. ACCELERATED BEGINNING LATIN. (5 cr per qtr, §1101-1102, §1103, §1104; previous experience in another foreign language desirable)

3105w. LATIN POETRY. (5 cr; prereq 1104 or Δ)
Selections from Catullus and Ovid.

3106s. LATIN POETRY. (5 cr; prereq 1122 or 3052 or 3105 or Δ)
Selected books from Virgil's *Aeneid*.

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 Grk-Lat or Lat major, three 3xxx courses in Latin or #)
Research paper utilizing 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.

3960. HONORS TUTORIAL. (5 cr per qtr; prereq Δ)

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq #, Δ)
Guided individual reading or study.

5012. PROSE COMPOSITION. (4 cr; prereq 3106 or Δ)

5235. MEDIEVAL LATIN. (4 cr; prereq #)
Literature from fifth to 12th centuries; Carolingian and 12th-century Renaissance.

5236. RENAISSANCE LATIN. (4 cr; prereq #)
Survey of Renaissance Latin literature.

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.

5310, 5320, 5340, 5370. 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. *5340*: Epic and Pastoral. *5370*: Satire.

5621. LATIN PALEOGRAPHY. (4 cr; prereq 3 3xxx-5xxx Latin cr or #)
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; prereq #)
Historical grammar of Greek and Latin from their Indo-European origin to the classical norms.

5733. VULGAR LATIN. (4 cr; prereq 3 yrs Latin or #)
Reading and analysis of sources for colloquial Latin. Romance dialectology.

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)

Classics (Clas)

These courses may be of interest to students of literature, archaeology, and culture. They may be applied to majors in classical civilization, the interdepartmental program described in preceding pages. They may also be applied to majors in Greek, Latin, or Greek-Latin. Knowledge of Greek or Latin is not required for these courses.

CLASSICAL HUMANITIES

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.

Major Requirements and Course Descriptions

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.

1066H. HONORS COURSE: INTRODUCTION TO CLASSICAL CIVILIZATION. (5 cr; prereq regis in honors program or # or Δ)

Students attend lectures in 1006 and meet with lecturer one additional period each week.

1042. GREEK AND ROMAN MYTHOLOGY I. (4 cr)

Heroes, gods, and goddesses of ancient Greece and Rome. The myths and the stories behind them.

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. (2-3 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.

3071. GREEK AND HELLENISTIC RELIGIONS. (4 cr, §5071; prereq jr)

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)

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)

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; prereq 8 cr in English literature or in foreign literature or Δ)

Homer's *Iliad* and *Odyssey*, Virgil's *Aeneid*; cultural context of epic, the heroic character, epic formulas and poetic techniques.

3082. GREEK TRAGEDY IN TRANSLATION (AESCHYLUS, SOPHOCLES, EURIPIDES). (4 cr, §5082; prereq 8 cr in English literature beyond Engl 1002 or in foreign literature or Δ)

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; prereq 8 cr in English literature or in foreign literature or Δ)

Greek and Roman comic theatre; several comedies discussed. Roman tragic drama as exemplified by tragedies of Seneca.

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.

3152. GREEK ART AND ARCHAEOLOGY. (5 cr, §ArtH 3152)

Architecture, sculpture, painting, and archaeology from 1050 B.C. to 31 B.C.

3162. ROMAN ART AND ARCHAEOLOGY. (5 cr, §ArtH 3162)

Roman art and material culture: origins, change, continuity, "progress" or "decay" in the later empire.

3181. HONORS COURSE: CLASSICAL EPIC IN TRANSLATION. (5 cr; prereq regis in honors program or # or Δ)

Students attend lectures in 3081 and meet with lecturer one additional period each week.

3282. HONORS COURSE: GREEK TRAGEDY IN TRANSLATION (AESCHYLUS, SOPHOCLES, EURIPIDES). (5 cr; prereq regis in honors program or # or Δ)

Students attend lectures in 3082 and meet with lecturer one additional period each week.

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq #, Δ)
Guided individual reading or study.

5004. EROTICISM AND FAMILY LIFE IN THE GRECO-ROMAN WORLD. (4 cr) Erickson
Greek and Roman family life in the shaping of personality; diachronic change in modes of erotic expression; narcissism and homosexuality; status and roles of women; evolving views of sexual morality in ancient world compared to present trends. Examples from art and literature.

5005. MADNESS AND DEVIANT BEHAVIOR IN ANCIENT GREECE AND ROME. (4 cr; prereq 2 cr in classics) Erickson
Definitions of madness in Greece and Rome, theories of its etiology; assessment of predisposing factors in Greece and Rome; madness in mythology, legend, and history; cross-cultural comparison with contemporary United States.

5071. GREEK AND HELLENISTIC RELIGIONS. (4 cr, §3071; prereq #)
Meets with 3071. Additional work for graduate credit.

5072. THE NEW TESTAMENT. (4 cr, §3072; prereq #)
Meets with 3072. Additional work for graduate credit.

5073. ROMAN RELIGION AND EARLY CHRISTIANITY. (4 cr, §3073; prereq #)
Meets with 3073. Additional work for graduate credit.

5080. NEW TESTAMENT PROSEMINAR. (4 cr per qtr [12 cr max]; prereq 3072 or 5072 or #)
Selected topics in study of the New Testament and related ancient literatures. Topics specified in *Class Schedule*.

5081. CLASSICAL EPIC IN TRANSLATION. (4 cr, §3081)
Meets with 3081. Advanced independent work required.

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.

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. (4 cr; prereq grad or #)
Research in classical scholarship, methods, bibliography, textual history, and criticism.

5960. TOPICS IN THE LITERATURE OF CLASSICAL ANTIQUITY. (4 cr, prereq #, Δ)
Literary topics, such as literary theory and criticism, problems in post-Aristotelian philosophy, and the development of biography.

5970. DIRECTED STUDIES. (1-5 cr per qtr; prereq #, Δ)
Guided individual reading or study.

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.

3051. GREEK ARCHAEOLOGY: ARCHAIC, CLASSICAL, AND HELLENISTIC. (4 cr; 1043 recommended)
Survey of Greek archaeology with emphasis on the archaic, classical, and Hellenistic periods.

5089. INTRODUCTION TO BIBLICAL ARCHAEOLOGY. (4 cr)
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.

5103. HELLENISTIC ART AND ARCHAEOLOGY. (4 cr, §ArH 5103; prereq jr or #)
Sculpture, architecture, painting, and topography in developing centers of Hellenistic culture in eastern Mediterranean areas from beginning of 4th century B.C. to end of Hellenistic period.

5104. ROMAN ARCHITECTURE. (5 cr, §ArH 5104; prereq jr or #)
Buildings in Rome and the empire from the 5th century B.C. to the 4th century A.D. Major archaeological sites.

5105. ROMAN PAINTING AND MOSAICS. (5 cr, §ArH 5105; prereq jr or #)
Roman painting and mosaics; specific problems; sites such as Pompeii and Antioch.

5106. GREEK PAINTING. (5 cr, §ArH 5106; prereq jr or #)
Research and analysis in classical art as applied to the study of vases, original objects, and sources.

5107. ROMAN SCULPTURE. (4 cr, §ArH 5107; prereq jr or #)
Sculpture of Rome and its provinces from the 1st century B.C. to the 4th century A.D.; the role of sculpture in Roman politics and religion.

Major Requirements and Course Descriptions

5108. GREEK ARCHITECTURE. (4 cr, §ArtH 5108; prereq jr or #)
Archaic and classical examples of religious and secular architecture and their setting in major archaeological sites.

5109. ETRUSCAN ART, ARCHITECTURE, AND ARCHAEOLOGY. (4 cr, §ArtH 5109; prereq jr or #)
The developing culture of the Etruscan people from their appearance in Italy around 1100 B.C. until their eclipse in the 1st century B.C., studied through the material remains of Etruscan civilization.

5110. PROSEMINAR: CLASSICAL ARCHAEOLOGY. (4 cr per qtr; prereq #)

5111. BRONZE AGE ART AND ARCHITECTURE IN GREECE, 3000-1100 B.C. (4 cr, §ArtH 5111; prereq one ancient art or archaeology course)
Artistic and architectural forms of the Neolithic Period in the Aegean area and the Cycladic, Minoan, and Mycenaean cultures.

5112. GREEK SCULPTURE: ARCHAIC, CLASSICAL, AND HELLENISTIC. (5 cr; prereq jr or #)
Style in Greek sculpture; the human figure. Basic methodology; interpretations of meaning.

5113. ARCHAIC AND CLASSICAL GREEK ART AND ARCHAEOLOGY. (4 cr, §ArtH 5113; prereq jr or #)
Architecture, sculpture, and painting in Greek lands from 9th through 5th centuries B.C. Examination of the 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; prereq #)
Field excavation, survey, and research at archaeological sites in the Mediterranean area. Techniques of excavation and exploration; interpretation of archaeological materials.

Communication Disorders (CDis)

Staff—Chair, Charles E. Speaks, 115 Shevlin Hall; **Director of Undergraduate Studies,** Samuel K. Haroldson, 115 Shevlin Hall; **Director of Graduate Studies,** Gerald M. Siegel, 115 Shevlin Hall
Professors: Broen, Brookshire, Lassman, Martin, McDermott, Moller, Siegel, Speaks, Starr, Ward

Associate Professors: Haroldson, Nelson, Reichle, Van Tasell

Assistant Professors: T. Doyle, Leek

Associate Clinical Specialists: Carlstrom, S. Doyle

Assistant Clinical Specialist: Hinder-scheit

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, 5506¹, 5507, 5508, 5606, 5607¹, 5608, 5701¹, 5703¹, and 5704¹, which deal with specific problems of human communication, may be of interest to majors in linguistics, psychology, child psychology, speech-communication, education, or medical and dental fields.

B.S. Major Sequence— Speech and Hearing Science

Required Preparatory Courses—Math 1111; Ling 3001 or 5001; Psy 1001, 1004-1005; Phys 1041-1042 or Biol 1009 and Phys 1041 or Biol 1009 and Phys 1001

¹Prerequisites required.

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, 5606, 5607, 5608, 5611, 5701, 5702, 5703, 5704, 5705, 5706, 5707

One of the following groups:

1. at least two courses from CPsy 5341, 5343; Psy 3051, 3124, 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, 1211, 1221, 1231
4. Psy 5017, 5018, 5019
5. EPsy 5620 or CPsy 5315; EPsy 5626

Recommended elective courses are Anth 1102; Chem 1004-1005; Econ 1001-1002 or 1004-1005; GCB 3002, 3022; Ling 3301; Soc 1001; Spch 1101

**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.

Required Preparatory Courses—Psy 1001, 1004-1005

Major Requirements—3101, 28 credits 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, 5606, 5607, 5608, 5611
3. disorders of the auditory system—5701, 5702, 5703, 5704, 5705, 5706, 5707

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, 5606, 5607, 5608, 5611
4. disorders of the auditory system—5701, 5702, 5703, 5704, 5705, 5706, 5707

3100f,w,s,su. CLINICAL AND RESEARCH OBSERVATION. (2 cr per qtr; S-N only; prereq Δ) 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,su. INTRODUCTION TO COMMUNICATION DISORDERS. (4 cr) Martin and staff
The processes and impairments of human oral communication.

5101s. COMMUNICATION PROBLEMS OF CHILDREN. (3 cr; prereq non-speech and hearing science major) S. Doyle and 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. Understanding and managing children with communication impairments in regular classrooms.

5102w. COMMUNICATION PROBLEMS OF ADULTS. (3 cr; prereq non-speech and hearing science major) 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) Lassman, McDermott
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.

Major Requirements and Course Descriptions

5305f. LANGUAGE DEVELOPMENT AND RETARDATION. (4 cr) Siegel

Language development as related to delayed or retarded language.

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. Laboratory.

5502s. STUTTERING. (4 cr) Haroldson, Martin

Description, nature, and treatment of stuttering in children and adults. Involvement in therapeutic and research activities.

5504w. ARTICULATION DISORDERS. (4 cr; prereq 5301, 5302) McDermott

Impaired articulation performance and associated factors. Principles of diagnosis and clinical management. Observation of clinical activities.

5507f. CLEFT PALATE, ORAL-FACIAL ANOMALIES AND SPEECH. (4 cr) Starr, Moller

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) Starr, Haroldson

Physical and physiological bases of normal voice production. Voice disorders (pitch, loudness, quality) and their symptomatology, etiology, and clinical management. Laryngectomy. Other organic disorders.

5606w. LANGUAGE ASSESSMENT AND INTERVENTION: EARLY STAGES. (4 cr) Reichle

Communication disorders in preschool age children with special emphasis on the assessment and management of language disorders observed in intellectually delayed, autistic, and sensory impaired as well as intellectually normal children.

5607s. LANGUAGE ASSESSMENT AND INTERVENTION: LATER STAGES. (4 cr; prereq 5305 or #) Broen

Language disorders in school age children with special emphasis on assessment and intervention.

5608s. LANGUAGE ASSESSMENT AND INTERVENTION: ADULTS. (4 cr) 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. (4 cr; prereq 5301, 5302 or #) Leek

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 #) Leek

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 #) Carlstrom, Van Tasell

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.

5704w,su. NOISE AND MAN. (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; preemployment testing and monitoring audiometry.

5705s. OBJECTIVE MEASURES OF AUDITORY FUNCTION. (3 cr; prereq 5701 or #; offered alt yrs) Leek

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. (3 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, Van Tasell

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—*Director*, Ronald Sousa, 301 Folwell Hall

Professors: Anderson (English), Clayton (English), Firchow (English), Godzich (Comparative Literature), Hurrell (English and Theatre Arts), Liberman (German), Liu (East Asian Studies), Schneider (French and Italian), Schulte-Sasse (German), Sousa (Spanish and Portuguese), Spadaccini (Spanish and Portuguese), Weber (French and Italian, German), Weiss (German), Zahareas (Spanish and Portuguese)

Associate Professors: Bensmaia (French and Italian), Duroche (German), Haley (English), Mishler (Scandinavian)

Assistant Professor: Chow (Comparative Literature)

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 department does not offer an undergraduate major, but the courses listed below are available as electives for CLA students. For a description of the graduate programs offered in comparative literature, write to the department, 301 Folwell Hall, University of Minnesota, 9 Pleasant Street S.E., Minneapolis, MN 55455.

1921. INTRODUCTION TO FILM STUDY. (4 cr, §ArH 1921) Bensmaia

The fundamentals of film language and the major theories of film presented through detailed analysis of several films.

3215. CINEMA AND IDEOLOGY. (4 cr, §Hum 3755) Bensmaia

The 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.

5181. THE PSYCHOANALYTIC STUDY OF LITERATURE. (4 cr; prereq reading knowledge of

French, German or Scandinavian) Mishler
Readings in Freud and Freudian theory. Application of theory to literary texts.

5223. THEORIES OF MONTAGE. (4 cr; prereq 5221) Bensmaia

Examination of theoretical problems of montage (editing) in history of film criticism. Theoretical debates in France in the 1950s between supporters of the "classical" theory of montage and supporters of the theory of "non-montage."

5233. LITERATURE AND FILM. (4 cr) Bensmaia
Historical development of the relationships between literature and cinema; exploration of major theoretical and esthetical 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, literary theory, or philosophy) Bensmaia

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.

5243. ART AND IDEOLOGY: LIVING CINEMA.

(4 cr, §Hum 5756) Bensmaia

Principal aesthetic and ideological characteristics of *Direct-Cinema*—Living Cinema, the impact it has had on the contemporary development of cinema of fiction, and the role it has played in the evolution of different forms of documentary and political cinema.

5311. FANTASY LITERATURE. (4 cr; prereq reading knowledge of French or German) Firchow

Fantasy literature (chiefly in the novel) from about 1800 to the present. Among authors considered: E. T. A. Hoffmann, Gautier, Gogol, Carroll, Chesterton, Morgenstern, Hesse, C. S. Lewis, Tolkien.

5321. LITERATURE AND PHENOMENOLOGY.

(4 cr; prereq reading knowledge of French or German) Duroche

Literary texts from a variety of literatures and languages—a phenomenological perspective. Theoretical foundations of selected critics, notably Ingarden and Merleau-Ponty.

5325. THE RENAISSANCE AND THE

BAROQUE: PROBLEMS OF PERIODIZATION.

(4 cr; prereq reading knowledge of either French, German, Spanish, Italian or Dutch or #) Renaud

Reflections in the arts, mainly literature, of events in several European cultures and how they related to events in the other cultures at a given time. Encounter of resurgent economic and sociopolitical forces with established ways of viewing, thinking, and believing in each culture; the network of intersecting values among the cultures.

Major Requirements and Course Descriptions

5331, 5332. THE EUROPEAN NOVEL, 1750-1950. (4 cr per qtr; prereq reading knowledge of French or German)

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, German, Spanish or #) Sousa

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.

5414. EUROPEAN FOLKTALES. (4 cr) Liberman
An overview of folktales as a genre of folklore with emphasis on fairy tales (wonder tales). Comparative study of Germanic, romance, and Slavic tales: their message, structure, and history.

5451. THE EPIC. (4 cr; prereq knowledge of French, German, Spanish or #) Sousa

Investigation of the history of the epic form, interrogation of its bases in pre-Classical and medieval oral poetry, and delineation of its evolution. Reading of selected epic poems, criticism on the subject.

5452. GENRE THEORY. (4 cr; prereq knowledge of French, German, Spanish or #) Sousa

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) Godzich

The 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).

5643. LITERATURE OF THE HOLY GRAIL.

(4 cr; prereq one course in medieval literature or #) Godzich

Study of the Grail from early Celtic elements through the *Perceval* of Chretien de Troyes, the *Continuations*, the *Joseph of Arimathea*, the *Quest for the Holy Grail*, the Vulgate Cycle, Wolfram von Eschenbach's *Parzival*, emphasizing problems of interpretation and major motifs. Modern versions of the Grail, including Monty Python.

5910. TOPICS IN COMPARATIVE LITERATURE. (3-6 cr per qtr; prereq reading knowledge of French, German or Spanish or #)

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, David Fox, 115 Lind Hall; Associate Head and Director of Graduate Studies, William D. Munro, 120 Lind Hall

Professors: Fox, Ibarra, Munro, Rosen, Sahni, Slagle, Stein

Associate Professors: Frankowski, Norberg, Thompson

Assistant Professors: Amit, Berzins, Boley, Carlis, Du, Gini, Pong, Powell, Tsai, Tripathi, Venkatesan, Vergis

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. Evaluations for admission are based on a minimum grade point average of 2.80 in the math and computer science courses listed below. You may apply to the department after completion of three quarters of calculus and CSci 3104. Application forms are available in 136 Lind. Transfer students should complete at least two technical courses at the University with a

minimum grade point average of 2.80 before applying for admission; at least one of these courses must be a computer science course.

B.A. Major Sequence

Required Preparatory Courses—Math 1211-1221-1231 or Math 1311-1321-1331 or Math 1611-1621; Math 3142 and 3211 or Math 3511 and 3211 (for students with better than average mathematical ability) or Math 3511 and 3521 (for students with high mathematical ability); Stat 3091 or 5121 (students intending to take additional work in statistics must take Stat 5121)

Major Requirements—3001, 3104, 3105-3106, 3107 or 5101, 3400, 5102, 5106, 5121, 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 only S-N).

A grade of at least C is required to satisfy prerequisite and degree requirements.

3001. PERSPECTIVES ON COMPUTERS AND SOCIETY. (4 cr, \$NSci 3201; prereq soph or #; informal lab)

The impact of computers on society. Partnership or confrontation. History of development. Potential for use. Computer utility. Benefits and potential problems. Chip technology and CAD, Software development and maintenance. 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.

3002. CREATIVE AND ANALYTICAL APPLICATIONS OF COMPUTERS IN THE ARTS I. (4 cr; informal lab)

Ideas leading to computer use in the liberal arts. Relevance to parent fields and conversion to programmable form. Examples from computer graphics, music, style and content analysis, parsing, language and literary studies, computer aided instruction, and cultural simulations.

3003. COMPUTER APPLICATIONS IN THE LIBERAL ARTS II. (4 cr; 3002 or #)

Programming techniques and high-level usage of computers for applications in liberal arts field such as language and textual analysis, modeling and simulation, data bases, spatial and statistical analysis, and other applications related to nonnumeric data.

3101. A FORTRAN INTRODUCTION TO COMPUTER PROGRAMMING. (4 cr; prereq non-computer science major, Math 1111 or 1201 or equiv or #; informal lab)

FORTRAN computer language with extensions; applications; programming techniques. Brings students to advanced-level competence in FORTRAN programming. Integral nonscheduled laboratory.

3102. INTRODUCTION TO PASCAL PROGRAMMING. (4 cr; prereq non-computer 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 non-scheduled laboratory.

3104. INTRODUCTION TO PROGRAMMING AND PROBLEM SOLVING. (5 cr; prereq Math 1211 or equiv or #; informal lab; required introductory course for computer science and math/computer science majors)

Algorithms, conditionals, recursion, numbers, truth values. Syntax; templates and nesting. Data types and operators. Problem solving—incremental and computational, linear search, binary search. Memory—variables, arrays, assignments. Loops—language constructs, hand simulation, systematic design, invariants, termination-bounding functions. Subprograms—interface specs, implementation, scope of variables, parameter modes. Design of test cases in Pascal.

3105. FUNDAMENTALS OF ALGORITHMS AND LANGUAGES I. (4 cr; prereq 3101 or 3102 or 3104 or #; informal lab)

Informal and formal approaches to algorithms, their properties and specification through an algorithmic language; computability, complexity, O-notation. Design of algorithms, solution techniques, problem decomposition, design documentation. Scope of variables and block structure. Analysis of numerical errors. Program testing. Examples from sorting and searching required to illustrate solution techniques.

3106. FUNDAMENTALS OF ALGORITHMS AND LANGUAGES II. (4 cr; prereq 3104, 3105, 3400 or \$3400 or #; informal lab)

Recursion as an algorithm development technique and its implementation in a programming language. LISP. Data structures, use of recursive data structures, pointers and records in Pascal, data abstractions and data invariants. Syntax. BNF. Semantics, abstract interpreters. Proving correctness of programs, inductive assertions, structural induction.

3107. INTRODUCTION TO THE STRUCTURE AND PROGRAMMING OF COMPUTER SYSTEMS. (4 cr, \$5101; for CSci majors...nonmajors should take 5101; prereq 3101 or 3102 or 3104 or #; informal lab)

Organization and logical structure of computer systems. Representation of programs and data. Number systems, primitive computer systems, programming in machine language. Extensions to more sophisticated systems, assembly language, sequencing, decision making, arithmetic, logical operations, character manipulation, iteration, subroutines, data description.

Major Requirements and Course Descriptions

3400. DISCRETE STRUCTURES OF COMPUTER SCIENCE. (4 cr; prereq Math 1231 or 1331 or equiv or #)

Proof techniques. Propositional calculus. First order logic. Sets and multisets. Combinatorics. Analysis of algorithms. Graphs.

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.

5101. STRUCTURE AND PROGRAMMING OF SOFTWARE SYSTEMS I. (4 cr, §3107; for non-CSci majors...majors should take 3107; prereq 3101 or 3102 or 3104 or #; informal lab)

Organization and logical structure of computer systems. Representation of programs and data. Number systems, primitive computer systems, programming in machine language. Extensions to more sophisticated systems, assembly language, sequencing, decisionmaking, arithmetic, logical operations, character manipulation, iteration, subroutines, data description.

5102. STRUCTURE AND PROGRAMMING OF SOFTWARE SYSTEMS II. (4 cr; prereq 3107 or 5101, CLA computer science major or IT upper division computer science major or electrical engineering major or grad or #; informal lab)

Extensions 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.

5104. SYSTEM SIMULATION: LANGUAGES AND TECHNIQUES. (4 cr; prereq 3107 or 5101, Stat 3091, CLA computer science major or IT upper division computer science major or grad or #; informal lab)

Methodologies relevant to simulation including queuing theory, variable generation, design of experiments, data collection, statistical analysis of output. Simulation languages, both flow and event oriented, including GPSS, SIMULA, SIMSCRIPT. Application to job shops; operations research and modeling of computer and communications systems.

5105. THEORY OF MACHINE ARITHMETIC. (4 cr; prereq 3107 or 5101 or #; informal lab)

Residue class arithmetic. Congruences and complement arithmetic. Integral additive and subtractive accumulators. Applications to absolute values and sign arithmetic, scaling and floating point operations.

5106. STRUCTURE OF HIGHER LEVEL LANGUAGES. (4 cr; prereq 5102 and 5121, CLA computer science major or IT upper division computer science major or grad 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 instantiations in a selected group of languages. Program description at compilation time and execution time.

5107. COMPUTER GRAPHICS I. (4 cr; prereq 3107 or 5101, 5121, CLA computer science major or IT upper division computer science major or grad 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 three-dimensional objects. Structures of graphical programming languages. Interaction handling. Raster graphics.

5117. COMPUTER GRAPHICS II. (4 cr; prereq 5107, CLA computer science major or IT upper division computer science major or grad or #)

Vector geometry. Three-dimensional modeling and viewing transformations. Perspective view generation and 3D clipping. Curves and surfaces. Hidden line and hidden surface removal. Realistic image generation. Advance display system architectures. Modeling of 3D graphics programming.

5121. INTRODUCTION TO DATA STRUCTURES. (4 cr; prereq 3106 and 3400, CLA computer science major or IT upper division computer science major or grad or electrical engineering or mathematics major or #; informal lab)

Concepts of data and its representation. Sequential and linked representations. Arrays, stacks, and queues. Chains, circular lists, and doubly linked lists. Dynamic storage management. Garbage collection and storage compaction. Generalized lists. Strings. Binary trees and trees. Tree traversal. Graphs. Activity networks.

5122. ADVANCED DATA STRUCTURES. (4 cr; prereq 5121, CLA computer science major or IT upper division computer science major or grad or electrical engineering or mathematics major or #; informal lab)

Internal and external sorting. Symbol tables. Optimal binary trees. AVL trees. Hashing. B-trees, tries. Files and indexes. ISAM, multilists, inverted files, cellular partitions, differential files.

5180. SOFTWARE ENGINEERING I. (4 cr; prereq CLA computer science major or upper div IT computer science major or grad, 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 CLA computer science major or upper div IT computer science major or grad, 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 will cover the process of systems development, from requirements analysis through maintenance. Student groups will specify, design, implement, and test partial software systems. Emphasis on application of general software development methods and principles from 5180, rather than 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 3400, 3107 or 5101, CLA computer science major or IT upper division computer science major or grad or #) Elementary computer architecture, gates, and digital logic; register transfers, micro operations; studies of existing systems.

5211. DATA COMMUNICATIONS AND COMPUTER NETWORKS. (4 cr; prereq 5102 and Stat 3091, CLA computer science major or IT upper division computer science major or grad or electrical engineering or mathematics major or #; informal lab) Network classification and services. Hardware components: multiplexors, concentrators, communications media. Network protocols and architectures. Research areas.

5280. COMPUTER AIDED DESIGN I. (4 cr; prereq 5122, 5201, upper division CLA or IT computer science, electrical engineering, or math major) CAD for digital systems with emphasis on VLSI. Hardware description languages: synthesis, simulation, text generation.

5281. COMPUTER AIDED DESIGN II. (4 cr; prereq 5122, 5201, upper division CLA or IT computer science, electrical engineering, or math major) 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 ANALYSIS. (4 cr; prereq Math 3142 or #; knowledge of Pascal or FORTRAN is 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. NUMERICAL ANALYSIS. (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.

5399. PROBLEMS IN NUMERICAL ANALYSIS. (1-4 cr [may be repeated for cr]; prereq #) Special courses or individual study arranged with a faculty member.

5400. INTRODUCTION TO AUTOMATA THEORY. (4 cr; prereq 3105 and 3400, CLA computer science major or IT upper division computer science major or grad or electrical engineering or mathematics major 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.

5401. INTRODUCTION TO FORMAL LANGUAGES. (4 cr; prereq 5400, CLA computer science major or IT upper division computer science major or grad or electrical engineering or mathematics major; informal lab) Formal grammars and languages and their related automata. Language hierarchy. Context-free grammars and languages. Pushdown automata. Normal form theorems. Operations on languages. Decidability and undecidability results. Parsing algorithms. Applications to programming.

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.

Major Requirements and Course Descriptions

5502. INTRODUCTION TO OPERATING SYSTEMS. (4 cr; prereq 5102 and 5121, CLA computer science major or IT upper division computer science major or grad 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.

5503. INTRODUCTION TO COMPILERS. (4 cr; prereq 5106 or 5504, CLA computer science major or IT upper division computer science major or grad or #; informal lab)

A higher level language, L, machine language, loaders, linkage editors; mapping L onto machine language, code generation techniques; derivation of an intermediate language and implementation of code generators from intermediate onto machine language. Students write the back end of an L compiler.

5504. INTRODUCTION TO COMPILERS. (4 cr; prereq 5106, CLA computer science major or IT upper division computer science major or grad 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 an L compiler.

5511. ARTIFICIAL INTELLIGENCE I. (4 cr; prereq 5121 upper div computer science major or grad 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.

5512. ARTIFICIAL INTELLIGENCE II. (4 cr; prereq 5511 upper div computer science major or grad 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, CLA computer science major or IT upper division computer science major or grad 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. The relationship between mathematical pattern recognition and artificial intelligence. Applications.

5531. ARTIFICIAL INTELLIGENCE PROGRAMMING TECHNIQUES. (4 cr; prereq 5512, upper div computer science major or grad 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.

5599. PROBLEMS: ARTIFICIAL INTELLIGENCE. (1-4 cr per qtr; prereq #)

Special courses or individual study arranged with a faculty member.

5702. THE PRINCIPLES OF DATA BASE SYSTEMS. (4 cr; prereq 5122, CLA computer science major or IT upper division computer science major or grad or #; informal lab)

Fundamental concepts. Conceptual data organization. Data models. Data manipulation languages. Data base design. Security and integrity. Performance evaluation. Query optimization. Distributed data base systems.

5703. DATA BASE SYSTEM DESIGN. (4 cr; prereq 5702, CLA computer science major or IT upper division computer science major or grad and #; informal lab)

Application of data base concepts to the design and development of data base systems and data base applications. Design of current commercial and research-oriented data base systems. Techniques of using data base systems for applications.

5799. PROBLEMS IN INFORMATION SCIENCE. (1-4 cr per qtr; prereq #)

Special course or individual study arranged with a faculty member.

Dance

Department of Theatre Arts

Staff—Dance Coordinator, (to be announced), 108 Norris Hall

Associate Professors—Lampe

Lecturers:—Atwood, Brin-Ingber, Cheng, Esposito, Fargnoli, Jasmin, Johnson-Jones, Maddux, Sealy, Stromme, Voss

Dance is the study of the theory and practice of dance art. Dance productions provide a laboratory for courses. Performance opportunities are available for all University students through student and Dance Repertory Theatre productions.

General Education—Courses that may be of interest to nonmajors are 1012, 1013, 1014, 1015, 1016, 1017, 1021, 1022, 1023, 1024, 1025, 1026, 1027, 1101, 3401, 3402, 5485, 5700

B.A. Major Sequence

Required Preparatory Courses—1101, 1115, 1116, 1117, Anat 1027, Th 1101, 1504, 1321

Major Requirements—3115, 3116, 3117, 3311, 3312, 3313, 3325, 3401, 3402, 3511, 3700, PE 3111; 12 cr in other 3xxx- and 5xxx-level courses chosen in consultation with adviser.

Major Project: 3851

The following order is recommended for completion of courses: 1101 first, 1xxx required preparatory courses before 3xxx core courses; 3311 before 3312 and 3313; 3851 and 5xxx electives during senior year.

Courses in art history, humanities, music, psychology, and studio arts are recommended.

Minor Sequence

Required Preparatory Courses—1101, 1115, 1116, 1117

Minor Requirements—3401, 3402, 3311, 3312, 3313; 11 additional credits chosen from 3115, 3116, 3117, 3325, 3511, 3626, 3700, 3712, 5312, 5313, 5485, 5605, 5700

1012. INTRODUCTION TO MODERN DANCE I. (4 cr)
The fundamentals of modern dance technique.

1013. INTRODUCTION TO MODERN DANCE I. (4 cr)
The fundamentals of modern dance techniques, level two. Exploring rhythms and dynamics underlying movement.

1014. INTRODUCTION TO MODERN DANCE III. (4 cr)
The fundamentals of modern dance techniques, level three. Exploring movement qualities.

1015. INTRODUCTION TO BALLET I. (1 cr)
The fundamentals of classical ballet techniques including barre and center work.

1016. INTRODUCTION TO BALLET II. (1 cr)
Fundamentals of classical ballet including barre, center work, and combinations, level two.

1017. INTRODUCTION TO BALLET III. (1 cr)
Fundamentals of classical ballet including barre, center work, combinations, adagio and allegro movements, level three.

1026. INTRODUCTION TO JAZZ I. (1 cr; prereq 1012, 1015) Sealy
Basic skills of jazz dance.

1027. INTRODUCTION TO JAZZ II. (1 cr; prereq 1026 or equiv) Sealy
Stylistic range of jazz dance and the difference in the resistance and the attack of the movement, level two.

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 with 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 1024 or equiv) Maddux
Intermediate international folk dance.

1101. INTRODUCTION TO DANCE. (4 cr)
Brin-Ingber
Survey of the history and theory of dance in all its forms and all its aspects.

1115. TECHNIQUE AND THEORY OF DANCE I. (2 cr; prereq 1014, 1017 or equiv) Cheng
Basic technique and theory of modern dance and classical ballet. Three days a week, modern dance; two days a week, ballet.

1116. TECHNIQUE AND THEORY OF DANCE I. (2 cr; prereq 1115) Cheng
Basic technique and theory of modern dance and classical ballet, level three. Three days a week, modern dance; two days a week, ballet.

1117. TECHNIQUE AND THEORY OF DANCE III. (2 cr; prereq 1116 or equiv) Cheng
Basic technique and theory of modern dance and classical ballet, level three. Three days a week, modern dance; two days a week, ballet.

3115. INTERMEDIATE TECHNIQUE AND THEORY OF DANCE IV. (4 cr; prereq 1117 or equiv) Fargnoli
Intermediate technique and theory of modern dance and classical ballet. Three days a week, modern dance; two days a week, ballet.

3116. INTERMEDIATE TECHNIQUE AND THEORY OF DANCE V. (4 cr; prereq 3115 or equiv) Fargnoli
Intermediate technique and theory of modern dance and classical ballet, level two. Three days a week, modern dance; two days a week, ballet.

Major Requirements and Course Descriptions

3117. INTERMEDIATE TECHNIQUE AND THEORY OF DANCE VI. (4 cr; prereq 3116 or equiv) Fargnoli

Intermediate technique and theory of modern dance and classical ballet, level three. Three days a week, modern dance; two days a week, ballet.

3311. IMPROVISATION. (2 cr; prereq 1014 or equiv) Jasmin

Exploration and spontaneous invention of movement themes and ideas through greater awareness of space, movement and community environment.

3312. DANCE COMPOSITION I. (2 cr; prereq 3311 or equiv) Jasmin

Basic principles of composition with an emphasis on imagination; culminating in the creation of a solo.

3313. DANCE COMPOSITION I. (2 cr; prereq 3312 or equiv) Jasmin

The use of form in choreography, culminating in a duet or trio.

3325. DANCE PRODUCTION I. (4 cr; prereq Th 1504 or equiv)

Theory and practice of technical dance theatre, management and promotion. Laboratory

3401. DANCE HISTORY I. (4 cr; prereq 1011)

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) Bin-Ingber

Major theatre dance works; dancers and choreographer from the Renaissance to the present.

3511. MUSIC FOR DANCE. (4 cr; prereq 1014, 1017 or equiv) Voss

Elements of music theory, form, analysis and history necessary for the potential dancer, choreographer, and musician to better understand each art.

3626. INTERMEDIATE JAZZ AND TAP

DANCE. (4 cr; prereq 1027 or equiv) Sealy
Various styles of jazz dance. Emphasis on the relationship of tap dance to jazz dance.

3700. DANCE REPERTORY THEATRE AND RECONSTRUCTION. (1-12 cr; audition)

Construction of a dance theatre work under the direction of a guest choreographer. Credit awarded the quarter performance takes place. Audition required.

3712. DANCE NOTATION. (4 cr) Johnson-Jones

Systems for recording movement; motif writing/description and lab notation.

3851. SENIOR SEMINAR. (4 cr; prereq senior dance major)

Lecture-discussions on issues in dance today culminating in a senior project.

5115. ADVANCED TECHNIQUE AND THEORY OF DANCE I. (4 cr; prereq 3117 or equiv) Voss

Advanced technique and theory of modern dance and contemporary ballet. Three days a week, modern dance; two days a week, ballet.

5116. ADVANCED TECHNIQUE AND THEORY OF DANCE II. (4 cr; prereq 5115 or equiv) Voss

Advanced technique and theory of modern dance and contemporary ballet, level two. Three days a week, modern dance; two days a week, ballet.

5117. ADVANCED TECHNIQUE AND THEORY OF DANCE III. (4 cr; prereq 5116) Voss

Advanced technique and theory of modern dance and contemporary ballet, level three. Three days a week, modern dance; two days a week, ballet.

5312. CHOREOGRAPHY I. (2 cr; prereq 3313 or equiv)

The use of form in small ensemble choreography.

5313. DANCE CHOREOGRAPHY II. (2 cr; prereq 5312 or equiv)

Continued study and development of the craft for large ensemble choreography.

5485. DYNAMICS OF DANCE/MOVEMENT THERAPY. (4 cr; prereq 1012, Psy 1001, #)

Study of movement analysis and body image. Emphasis on individual movement behavior and its relationship to verbal communication and the ongoing process. Field work observation.

5605. DANCE FOR CHILDREN. (4 cr; prereq 1012, 1015, #)

Movement vocabulary, movement exploration, form building, and composition studies for children culminating in a children's dance performance.

5616. TEACHING OF DANCE. (4 cr; prereq 3115, #) Atwood

Study and experimentation of methods, principles, and techniques of teaching dance.

5700. WORKSHOP: DANCE PERFORMANCE. (1-12 cr; prereq 1101 or #)

Technique, improvisation, choreography, music, design, and technical production as they relate to dance performance.

Danish

See Scandinavian.

Dutch

See German.

East Asian Studies

Staff—Chair, (to be announced), 113 Folwell Hall

Regents' Professor: Turner (Political Science)

Professors: Copeland (Japanese), Farmer (History), Hsu (Geography), Liu (Chinese), Marshall (History), Matsumoto (Japanese), Poor (Art History), Spencer (Anthropology), Taylor (History), S. Wang (Chinese)

Associate Professors: Huters (Chinese), Jacobsen (Japanese), Kagan (Music), Lee (Journalism and Mass Communications), Yu (Humanities)

Assistant Professors: Cass (Chinese), Chow (Comparative Literature), Ito (Economics), Waltner (History)

Instructor: Jackson (Japanese)

Adjunct Faculty—Tsuchida (Asian/Pacific American Learning Resource Center), R. Wang (East Asian Library)

East Asian studies deals with the languages of China and Japan as well as the literature, history, and culture of East Asian societies. The department offers degrees in three areas—Chinese, Japanese, and East Asian studies—and its faculty is drawn from both humanities and social science disciplines. Students may emphasize linguistic, literary, or multidisciplinary approaches. Programs are planned in consultation with advisers. Students considering graduate work should begin their planning early in order to ensure appropriate preparation. Interested students may consult with an adviser in the department office, 113 Folwell Hall.

General Education—Courses designated EAS have no language requirements or other prerequisites (unless specifically noted) and are particularly suitable for nonmajors interested in the contemporary societies, diverse cultures, and historical experience of this important area of the world. For other courses of general interest, see Chn 1201, 1202, 3161, 3162, 3163, and Jpn 3161, 3163, 3164.

**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: 1032, 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 chose either a social sciences or a humanities focus:

Social Science Focus: Three history courses selected from 3464, 3465, 3467, 3468, 3471, 3472, 3868, or 5xxx courses on China or Japan; three social science courses selected from 3281, Anth 5533, Econ 5301, 5315, 5401, Geog 3213, 5811, Pol 5434, 5454, Soc 5511, 5952, or SPFE 5131; four additional courses from the approved list, of which at least two must be selected from courses in the humanities listed below

Humanities Focus: Four literature courses selected from Chn 3161, 3162, 3163, Jpn 3161, 3163, 3164, or 5xxx courses on China or Japan; two humanities courses selected from 3001, 3013, 3808, ArtH 5765, 5766, 5767, 5769, Mus 5810; four additional courses in the social sciences selected from those listed above, of which no more than two may be in history

Major project: completed in 3300

**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. No more than 20 percent of the total credits may be taken on an S-N basis.

B.A. Major Sequence—Chinese

Required Preparatory Courses—1011-1012-1013

Major Requirements and Course Descriptions

Major Requirements—3041-3042-3043; 3031-3032-3033, usually taken in conjunction with 3021-3022-3023 or with 3041-3042-3043; four courses (16 cr) selected from 3161, 3162, 3163, or from any courses numbered 51xx or above

Major project: EAS 3300

Minor Sequence—Chinese

Required Preparatory Courses—1011, 1012, 1013

Minor Requirements—3021, 3022, 3023

Two additional 3xxx or 5xxx Chn courses, of which only one may be in directed or independent study

The minor program must have department approval. Courses may not be taken on an S-N basis.

B.A. Major Sequence—Japanese

Required Preparatory Courses—1011-1012-1013

Major Requirements—3051-3052-3053, usually taken in conjunction with 3031-3032-3033; 3022-3023; 3031-3032-3033; 5451 or 5452, usually taken in conjunction with 3031; 3163 (qualified students may substitute 5041 or 5460), 3161 and 3164 (qualified students may substitute 5361, 5362, 5363 or 5364 for either or both)

Major project: EAS 3300

Minor Sequence—Japanese

Required Preparatory Courses—1011, 1012, 1013

Minor Requirements—3021, 3022, 3023

Two additional 3xxx or 5xxx Jpn courses, of which only one may be in directed or independent study

The minor program must have department approval. Courses may not be taken on an S-N basis.

East Asian Studies (EAS)

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

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

1063. CHINA: THE MIDDLE KINGDOM. (4 cr) Cass

Interdisciplinary introduction to fundamental themes and institutions of Chinese culture, from beginnings through modern age, through study of works of philosophy, literature, art, music and religion. Contacts with the West.

1461. INTRODUCTION TO EAST ASIA: EARLY CIVILIZATION. (4 cr, §Hist 1461, §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.

1462. INTRODUCTION TO EAST ASIA: THE IMPERIAL AGE. (4 cr, §Hist 1462, §Hist 3462)

Marshall, Taylor

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 1463, §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.

3001. CHINESE-JAPANESE CALLIGRAPHY.

(4 cr) Matsumoto

Chinese calligraphic styles; aesthetic analysis; demonstration, practice of techniques.

3013. INTRODUCTION TO FAR EASTERN ART.

(4 cr, §ArtH 1016, §ArtH 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.

3281. CULTURE AND SOCIETY OF CHINA AND JAPAN.

(4 cr, §Anth 3281) Spencer

Chinese institutions and other cultural manifestations. Influences on cultures of Japan, Korea, Vietnam. Analysis of and comparison between contemporary Chinese and Japanese societies.

3300. PROSEMINAR: INTERDISCIPLINARY TOPICS IN EAST ASIAN STUDIES. (4 cr per qtr [12 cr max])

Introductory proseminar taught by faculty members from two or more disciplines.

3464. EARLY MODERN CHINA, 1350-1750. (4 cr, §Hist 3464, §Hist 5464) Farmer

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
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, §Hist 5471) Marshall
Development of an industrial society, parliamentary government, mass culture, and imperialism from Meiji reforms of 19th century through World War II to contemporary period.

3472. EARLY MODERN JAPAN. (4 cr, §Hist 3472, §Hist 5472) Marshall
Tradition and change in society and culture under the Tokugawa shoguns, 1600-1867; growth of cities and decline of samurai class; response to Western intrusion.

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, §ArtH 3941)
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.

5032. BUDDHISM IN EAST ASIA. (4 cr, §RelS 5032; prereq jr or sr or #) Taylor
The origins of Buddhism in India, its spread and acculturation in China and Japan. Basic doctrines and practices, major sectarian divisions.

Chinese (Chn)

1011-1012-1013. BEGINNING MODERN CHINESE. (5 cr per qtr)
Speaking and reading modern standard Chinese through structured practice.

1201. HERITAGE OF CHINA: EARLY PERIOD. (4 cr, §Hum 1201)
Chinese culture from beginnings through 10th century: literature, philosophy, history, visual arts, and music. Confucianism, Taoism, and Buddhism. Primary texts read in translation.

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.

3021-3022-3023. INTERMEDIATE MODERN CHINESE. (5 cr per qtr; prereq 1013)
Modern standard Chinese, expanded through conversation and reading.

3031-3032-3033. 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.

3041, 3042, 3043. THIRD-YEAR MODERN CHINESE. (4 cr per qtr, §5041, 5042, 5043; prereq 3023 for 3041...3041 for 3042...3042 for 3043)
3041: Reading and analysis of 20th-century texts. 3042, 3043: Reading and analysis of vernacular texts.

3051, 3052. 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 (ca. 1919) to present. Knowledge of Chinese not required.

Major Requirements and Course Descriptions

3165. CHINESE DRAMA IN ENGLISH TRANSLATION. (4 cr) Liu

An introduction from the origins in medieval Chinese sources through contemporary productions in the classical theatre and regional operas.

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

5041f, 5042w, 5043s. THIRD-YEAR MODERN CHINESE. (4 cr per qtr, §3041, 3042, 3043; prereq 3023 for 5041...5041 for 5042...5042 for 5043)

For description, see 3041, 3042, 3043; additional work required.

5051, 5052. ADVANCED CHINESE CONVERSATION AND COMPOSITION. (4 cr per qtr, §3051, 3052; prereq 3023 or #, grad standing)

For description, see 3051, 3052; additional work required.

5101. READINGS IN MODERN CHINESE PROSE. (4 cr; prereq 3043 or #)

Reading and discussion of representative samples of Chinese expository prose.

5102. READINGS IN MODERN CHINESE FICTION. (4 cr; prereq 3043 or #)

Reading and analysis of selected short fiction from 1918 to the present.

5103. READINGS IN CHINESE DRAMA. (4 cr; prereq 3033, 3043 or #) Liu

Critical reading of representative plays from 13th century to present. Dimensions of vernacular style.

5104. READINGS IN CHINESE POETRY. (4 cr; prereq 3033 or #)

Reading and analysis of works of selected major poets and poetic forms from first anthologies through 12th century.

5105. READINGS IN CHINESE VERNACULAR FICTION. (4 cr; prereq 3043 or #) Cass

Selections from great works of traditional fiction including short stories and novels such as *Journey to the West* and *Dream of the Red Chamber*.

5106. READINGS IN TRADITIONAL CHINESE PROSE. (4 cr; prereq 3031, 3032 or 3033)

Selections from classical Chinese prose such as pre-Han philosophical texts and historical texts of pre-modern period.

5107. READINGS IN CHINESE FOLKTALES. (4 cr; prereq 3033, 3043 or #)

Critical reading of published texts of transcribed folktales with emphasis on linguistic patterns of natural narrative, rhythm, and structure of spoken Chinese preserved in the texts.

5251. STRUCTURE OF STANDARD CHINESE. (4 cr; prereq 1013 and #) Wang

Phonological and syntactic structures of modern standard Chinese.

5252. HISTORY OF THE CHINESE LANGUAGE. (4 cr; prereq 3031...Ling 3601 highly recommended) Wang

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 #) Wang

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.

5472. RESEARCH METHODS. (4 cr; prereq 3033)

Philological and textual research in the Chinese humanities.

5970. DIRECTED STUDIES. (1-4 cr per qtr; prereq Δ)

Guided individual reading or study.

Japanese (Jpn)

1011-1012-1013. BEGINNING JAPANESE. (5 cr per qtr)

Reading, writing, and speaking Japanese.

3021-3022-3023. INTERMEDIATE JAPANESE. (5 cr per qtr; prereq 1013)

Foundation for reading knowledge of Japanese. Review and pattern drill.

3031-3032-3033. 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.

3051, 3052, 3053. 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)

Japanese novels after 1900 by authors influenced by impact of Western culture. Knowledge of Japanese not required.

3163. TRADITIONAL LITERATURE OF JAPAN IN ENGLISH TRANSLATION. (4 cr) Copeland

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.

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

Guided individual reading or study.

5041-5042-5043. CLASSICAL JAPANESE. (5 cr per qtr; prereq 3033) Copeland
Classical Japanese; masterpieces of Japanese literature in classical language; grammatical construction.

5051, 5052, 5053. ADVANCED JAPANESE CONVERSATION AND COMPOSITION. (4 cr per qtr, \$3051, 3052, 3053; prereq 3023 or #, grad standing)
For description, see 3051, 3052, 3053; additional work required.

5251. HISTORY OF JAPANESE LANGUAGE.

(4 cr; prereq 3033 or 5451 or #) Jacobsen
Development of Japanese grammar from classical to modern language.

5361, 5362. READINGS IN MODERN JAPANESE LITERATURE I. (4 cr per qtr; prereq 3033)

Traditionalist and aesthetic authors of 19th- and 20th-century Japan.

5363, 5364. READINGS IN MODERN JAPANESE LITERATURE II. (4 cr per qtr; prereq 3033)

Realist, naturalist, and humanist authors of 19th- and 20th-century Japan.

5451. STRUCTURE OF JAPANESE: SYNTAX/SEMANTICS. (4 cr; prereq 3023, Ling 3001 or #) Jacobsen

Analysis of structure and meaning of Japanese sentence patterns.

5452. STRUCTURE OF JAPANESE: PHONOLOGY/MORPHOLOGY. (4 cr; prereq 3023, Ling 3001 or #) Jacobsen

Generative and nongenerative approaches to Japanese sound structure and word structure.

5460. PROSEMINAR IN JAPANESE LITERATURE. (4 cr; prereq 5361, 5362)

Selected poetic, expository, narrative, and dramatic texts. Topics specified in *Class Schedule*.

5471. RESEARCH METHODS. (4 cr; prereq 3033)

Philological and textual research in Japanese sources.

5472. JAPANESE BIBLIOGRAPHY. (4 cr; prereq #)

Primary sources, secondary materials in the native research tradition.

5650. PROSEMINAR: JAPANESE LINGUISTICS. (4 cr per qtr [max 12 cr]; prereq 5451 or #) Jacobsen

Selected topics from the syntax, pragmatics, and lexicon of Japanese and/or comparative English and Japanese.

5970. DIRECTED STUDIES. (1-15 cr; prereq #, Δ, CLA approval)

Guided individual reading or study.

Ecology and Behavioral Biology (EBB)

College of Biological Sciences

Staff—Head, Franklin H. Barnwell, 109 Zoology Building; **Director of Undergraduate Studies,** Franklin H. Barnwell, 310 Zoology Building

Regents' Professors: Davis, Gorham, Wright

Professors: Barnwell, Birney, Corbin, Cushing, Gilbertson, McKinney, McNaught, Megard, Morrow, Parmelee, Phillips, Regal, Schmid, Shapiro, Siniff, Tester, Tilman, Tordoff, Underhill

Associate Professors: Abrams, Beatty, Bright

Assistant Professors: Alstad, Packer, Pusey

Adjunct Faculty—Professors: Heinselman, Mech (U.S. Fishery and Wildlife Service)

Ecology and behavioral biology deal with the study of animals and plants and their evolution, behavior, and interactions in communities and ecosystems.

General Education—Courses especially appropriate for nonmajors include Biol 1106 and EBB 3001, 3111.

Biol 1106w,s,su. GENERAL ZOOLOGY. (5 cr; prereq Biol 1009) Schmid, Underhill
Survey of animal phyla; structure, function, behavior, adaptation, and evolutionary relationships.

Biol 3042. FIELD PROBLEMS IN ECOLOGY. (2 cr; prereq Biol 5041 or #)
Student research in selected ecological problems.

Biol 5041f,w,su. ECOLOGY. (4 cr; prereq Math 1142 or 1211, Biol 1103, 1106 or 3011 or 3012) Staff
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.

Major Requirements and Course Descriptions

Introductory Ecology and Behavioral Biology

3001w.s. INTRODUCTION TO ECOLOGY. (4 cr; open to jrs and above but not to biology majors) Corbin, Megard

Basic concepts in ecology; the organization, development, and functioning of ecosystems; population growth and regulation. Human impact on ecosystems.

3101w. ECOLOGY FOR ENGINEERS AND PHYSICAL SCIENTISTS. (4 cr, §3001; not open to biology majors; prereq Math 1231) Bright
Spatial and temporal interactions between populations in ecosystems; processes affecting populations; transformations of energy and materials in the biosphere. Lectures and recitations.

3111s. INTRODUCTION TO ANIMAL BEHAVIOR. (4 cr, §AnSc 3111; prereq Biol 1106 or 3011 or #) Pusey

The nature, variety, development, motivation, and evolution of animal behavior emphasizing social interactions and communication.

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.

Community Ecology and Paleoecology

5008s. QUATERNARY ECOLOGY. (4 cr; prereq Biol 5041 or #; offered 1986-87 and alt yrs) Davis
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.

5014f. ECOLOGY OF PLANT COMMUNITIES. (5 cr; prereq Biol 5041, 1 qtr statistics or #) Cushing
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.

5016s. ECOLOGICAL PLANT GEOGRAPHY. (5 cr; prereq Biol 5041, Bot 3201 or ¶Bot 3201 or #; offered 1987-88 and alt yrs) Cushing
Vegetative 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

5044f. EVOLUTION. (4 cr; prereq Biol 1106 or 3011) Merrell
Evidence for and causes of biological evolution.

5051w. ANALYSIS OF POPULATIONS. (4 cr; prereq Biol 5041 or #; offered 1986-87 and alt yrs) Siniff
Factors involved in the regulation, growth, and general dynamics of populations. Data needed to describe populations, population growth, population models, and regulatory mechanisms.

5052w. THEORETICAL POPULATION ECOLOGY. (4 cr; prereq Biol 5041 or #; offered 1986-87 and alt yrs) Tilman
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.

5063w. EVOLUTIONARY ECOLOGY OF INSECT POPULATIONS. (3 cr; prereq Biol 5041 or #) Alstad

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.

5065s. THEORETICAL EVOLUTIONARY ECOLOGY. (3 cr; prereq Math 1231, one 5xxx-level course in ecology, evolution, or behavior, or #) Abrams

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

5114f. VERTEBRATE BIOLOGY. (4 cr; prereq Biol 1106 or 3011; offered 1987-88 and alt yrs) Birney
Vertebrates: their biology, taxonomy, and distribution.

5116s. INTRODUCTION TO ANIMAL PARASITOLOGY. (5 cr; prereq Biol 1106 or 3011) Gilbertson
Parasitic protozoa, worms, and arthropods and their relation to diseases of humans and animals.

5122f. PLANT/ANIMAL INTERACTIONS. (4 cr; prereq Biol 3011, 3012 or #) Morrow
Herbivory, pollination, seed dispersal. Implications of interaction for plants and animals at organismal, population, and community levels. Coevolution.

5128s. ADAPTATION AND MACROEVOLUTION: VERTEBRATES. (4 cr; prereq Biol 1106 or 3011; offered 1987-88 and alt yrs) Regal
Patterns and problems in evolution at the species level and above in the context of an introduction to vertebrate phylogeny, ecology, and adaptations. Lectures, demonstrations, and field trips.

5129f. MAMMALOLOGY. (5 cr; \$FW 5129; prereq Biol 1106 or 3011 or #; offered 1986-87 and alt yrs) Birney
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.

5132s. HERPETOLOGY. (5 cr; prereq Biol 1106 or 3011 or #; offered 1986-87 and alt yrs) Regal
Distribution, classification, and evolution of amphibians and reptiles of the world. Physiological, morphological, and behavioral aspects of adaptive trends. Laboratory and lecture.

5134s. INTRODUCTION TO ORNITHOLOGY. (5 cr; prereq Biol 1106 or 3011) Tordoff
Laboratory and field course in structure, classification, distribution, migration, habits, habitats, and identification of birds. Weekend trips scheduled.

5136w. ICHTHYOLOGY. (4 cr; prereq 15 cr incl Biol 1106 or 3011) Underhill
Biology of fishes including development, systematics, anatomy, physiology, and ecology.

5156s. COMPARATIVE ANIMAL PHYSIOLOGY. (5 cr; prereq Biol 1106 or 3011, Chem 3302 or #) Schmid
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

5321f. EVOLUTION OF SOCIAL BEHAVIOR. (4 cr; prereq Biol 1106 or 3011 or #) McKinney
Introduction to current theories and concepts relating to mating systems, spacing systems, and cooperative behavior in animals.

5323w. MECHANISMS OF ANIMAL BEHAVIOR. (5 cr; prereq Biol 3011 or 1 qtr of animal physiology) Barnwell, Phillips
A survey of animal behavior mechanisms: their organization and their functions. Analysis of behavior sequences, motor coordination, fixed action patterns, sensory systems and release mechanisms, mechanisms of animal communication, orientation behavior, feedback mechanisms and control, behavior of small neural networks. Laboratory included.

5325w. BEHAVIORAL ECOLOGY (4 cr; prereq 5321 or #) Packer
Ecological determinants of foraging behavior, social organization, demography, and life-history strategies.

Limnology and Ecosystem Ecology

5601f,w. LIMNOLOGY. (4 cr, \$Geo 5601; prereq Chem 1005 or #) Shapiro, Gorham, Megard
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.

5606s. ECOLOGY OF FISHES. (3 cr; prereq Biol 1106 or 3011, EBB 5136, 10 cr in biological sciences; offered 1986-87 and alt yrs) Underhill
Ecological requirements of fishes, their habitat and food with emphasis on nongame species; interactions among species, and behavioral, anatomical, and physiological adaptations. Fishes in the aquatic ecosystem with emphasis on fresh waters.

5607. ECOLOGY OF ANIMAL PLANKTON. (4 cr; prereq Biol 5041, EBB 5601 or #; offered 1986-87 and alt yrs) McNaught
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.

5608s. ECOSYSTEMS: FORM AND FUNCTION. (3 cr; prereq 5601 or Biol 5041, Chem 1002 or 1005) Davis, Gorham
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.

5613w. ASSESSING THE ECOLOGICAL EFFECTS OF POLLUTION. (4 cr; prereq Biol 5041 or equiv, Chem 3301, 3302) Gorham
Assessment of effects upon species and ecosystems, methodological problems, initial phases of investigating a new pollutant, problems of prediction.

5621f,s. LIMNOLOGY LABORATORY. (2 cr, \$Geol 5621; prereq EBB 5601 or Geol 5601 or #) Megard, Shapiro
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.

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.

Major Requirements and Course Descriptions

Courses Offered at Lake Itasca Forestry and Biological Station

See the *Summer Session Bulletin* for course descriptions.

3800su. INTRODUCTION TO FIELD RESEARCH. (10 cr; prereq two courses in biology, Δ)

5814su. COMMUNITY STRUCTURE AND FUNCTION. (5 cr; prereq course in ecology, Δ)

5815su. FIELD ETHOLOGY. (5 cr; prereq course in behavior, Δ ...course in statistics recommended)

5817su. VERTEBRATE ECOLOGY. (5 cr; prereq course in ecology, #, Δ)

5820su. WETLAND ECOLOGY. (10 cr; prereq 15 cr of biology, introductory chemistry, course in plant identification, Δ Biol 5041 recommended; offered 1986-87)

5831su. NATURAL HISTORY OF INVERTEBRATES. (5 cr; prereq Biol 1106, Δ)
Advanced taxonomic and ecological survey of local fauna and independent ecological studies of several taxonomic groups.

5834su. FIELD ORNITHOLOGY. (5 cr; prereq Biol 1106, Δ)

Economics (Econ)

Staff—Chair, N. J. Simler, 1035 Management and Economics Building; **Director of Undergraduate Studies,** Edward Coen, 1035 Management and Economics Building; Altug, Chipman, Feldman, Foster, Heller, Hildreth, Hurwicz, Ito, Jordan, Kareken, Lee, Marimon, Mohring, Pitt, Prescott, Richardson, Richter, Rosenzweig, Ruttan, Sargent, Sims, Slemrod, Swan, Wallace

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: 5161-5162-5163, 5164-5165-5166, 5261-5262-5263, 5461-5462-5463.

General Education—All courses are open to nonmajors, but those with minimal prerequisites may be of special interest. Courses that require no prior course work in economics are 1001, 1001H, 1002, 1002H, 1004, and 1005. Those that require only 1001 and 1002 as prerequisites are 3031, 3033, 3041, 3501, 3601, 3701, 3801, 3970, 5021, 5301, 5307, 5315, 5401, 5623, and 5701.

B.A. and B.S. Majors—The B.A. sequence is relatively nonmathematical and nonquantitative in orientation. The B.S. sequence emphasizes mathematical and statistical methods in economics. If you are contemplating graduate work in economics or a career as a professional economist in business, government, or college teaching, you are advised to select the B.S. program, or to include in a B.A. program approximately the same course work required for the B.S. The adviser for majors and premajors is the director of undergraduate studies.

B.A. Major Sequence

Required Preparatory Courses—1001 or 1001H or 1004; 1002 or 1002H or 1005; Math 1142 or equiv; Stat 1051 or equiv

Major Requirements—

3101 or 3101H, 3102 or 3102H, 3103 or 3103H (3101 must be taken first; then 3102 and 3103 may be taken simultaneously)

24 3xxx-5xxx cr; may include two courses from Acct 3100, 3102, BFin 3000, 3300, DSci 3055

Composition requirement: Comp 3014 (Writing for the Quantitative Social Sciences) or 3027 (Advanced Expository Writing)

Senior project: major paper (obtain guidelines from the department)

Two courses in the major may be taken S-N.

Departmental permission is required to apply more than 8 cr of directed studies courses (3970, 5970) toward the major.

Supporting work in computer science, mathematics, and statistics is recommended.

B.S. Major Sequence

Required Preparatory Courses—1001 or 1001H or 1004; 1002 or 1002H or 1005; Math 1211-1221-1231 or 1311-1321-1331 or 1611-1621 or equiv; Stat 1051 or equiv recommended

Major Requirements—Math 3211 and one qtr linear algebra (Math 3142 recommended)

Stat 5021-5022 or 5121-5122 or 5131-5132 (5131-5132 are more difficult)

5231 or 5261 or Stat 5302 (5261 is more difficult)

3101 or 3101H, 3102 or 3102H, 3103 or 3103H (3101 must be taken first, then 3102 and 3103 may be taken simultaneously)

24 3xxx-5xxx cr; may include two courses selected from Acct 3101, 3102, BFin 3000, 3300, DSci 3055, 5000; also may include one Math course with prereq of 3142 or 3211 or 3221 or consent of adviser

Two courses from: 5113; 5xxx-level honors courses; 5733-5734-5735; and 5161- 5162-5163, 5164-5165-5166, 5261-5262-5263, 5271-5272, 5461- 5462-5463. Courses in this last group may be taken S-N. Other courses in the major must be taken A-N.

Composition requirement: Comp 3014 (Writing for the Quantitative Social Sciences) or 3027 (Advanced Expository Writing)

Supporting work in computer science is recommended.

Minor Sequence

Required Preparatory Courses—1001, 1002, knowledge of elementary algebra

Minor Requirements—3101 or 3105

16 3xxx-5xxx cr

You should submit your minor program for advance approval to the director of undergraduate studies.

General

1001f,w,s. PRINCIPLES OF MACROECONOMICS. (4-5 cr, \$1004, \$1014, \$3001, \$3002; prereq 3rd-qtr fr or CDS student, knowledge of elementary algebra at level of Math 0006)
National income; money and banking; business cycles; international trade.

1001Hf,w,s. HONORS COURSE: PRINCIPLES OF MACROECONOMICS. (5 cr, \$1004, \$1014, \$3001, \$3002; prereq 3rd-qtr fr, knowledge of elementary algebra at level of Math 0006; B avg recommended)

1002f,w,s. PRINCIPLES OF MICROECONOMICS. (4 cr, \$1005, \$1015, \$3001, \$3002; prereq 3rd-qtr fr, knowledge of elementary algebra at level of Math 0006)

Demand and supply; competition and monopoly; the distribution of income.

1002Hf,w,s. HONORS COURSE: PRINCIPLES OF MICROECONOMICS. (5 cr, \$1005, \$1015, \$3001, \$3002; prereq 3rd-qtr fr, knowledge of elementary algebra at level of Math 0006; B avg recommended)

1004f,w,s. PRINCIPLES OF MACROECONOMICS. (4 cr, \$1001; prereq 1 qtr calculus)
For description, see 1001.

1005f,w,s. PRINCIPLES OF MICROECONOMICS. (4 cr, \$1002; prereq 1 qtr calculus)
For description, see 1002.

Economic Theory

3101f,w,s. MICROECONOMIC THEORY. (4 cr, \$3105; prereq 1001, 1002, Math 1111 or 1141 or 1131 or equiv; no cr for management students)
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 1001, 1002, 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.

3102H. HONORS COURSE: MACROECONOMIC THEORY. (5 cr; prereq 3101 or 3101H or #, 1 qtr calculus; B avg recommended)

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.

Major Requirements and Course Descriptions

3103H. HONORS COURSE: WELFARE ECONOMICS. (5 cr; prereq 3101 or 3101H or #, 1 qtr calculus; B avg recommended)

3105. MANAGERIAL ECONOMICS. (4 cr, \$3101, \$BGS 3001; for pre-management and School of Management students only; prereq 1001, 1002, 1 qtr calculus)

Theory of the firm; managerial decision problems. Demand theory. Production technology and cost concepts. Pricing and output decisions. Investment behavior.

5113. INTRODUCTION TO MATHEMATICAL ECONOMICS. (4 cr; prereq 3102, 3103 or equiv, Math 3142, 3211)

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, \$3101; prereq 1001, 1002, 1 qtr calculus, grad student 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, \$3102; prereq 1001, 1002, 1 qtr calculus, 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 3142 or equiv, Math 3211, #; 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 3142 or equiv, Math 3211, #; 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.

5271, 5272. BAYESIAN DECISION MAKING.

(4 cr per qtr, \$Stat 5271-5272, \$AgEc 5271-5272; prereq 3101 or equiv, Stat 5122 or equiv for 5271...5271 for 5272)

5271: Rationale for expected utility representation of decision problems. Amount of a venture problem. Production decision by firms. Combinations of ventures, portfolio problems. 5272: Sequential economic decisions. Dynamic programming. Multivariate utility.

Econometrics

5231. INTRODUCTION TO ECONOMETRICS. (4 cr; prereq QA 3053 or Stat 5022, Math 3142, or equiv or #)

Least-squares estimation in two- and three-variable linear models. Significance tests and confidence intervals. Autocorrelation and multicollinearity. Distributed lags. Simultaneous equation systems. Identification, least squares bias. Two-stage least squares. Case studies.

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

5301. ECONOMIC DEVELOPMENT. (4 cr, \$5331; not open to economics majors; prereq 1001, 1002 or equiv)

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; not open to economics majors; prereq 1001, 1002 or equiv)

Functions of economic systems; market economy, liberal socialism, centrally planned economy. American and Soviet economies.

5315. THE JAPANESE ECONOMY. (4 cr; prereq 3101, 3105)

Economic development following contact with Western civilization. Current problems; population growth, capital formation, international economic relations.

5331. ECONOMIC DEVELOPMENT. (4 cr, \$5301; prereq 3101, 3102 or equiv or #)

For description, see 5301.

5337. COMPARATIVE ECONOMIC SYSTEMS.

(4 cr, \$5307; prereq 3101, 3102 or #)

For description, see 5307.

International Economics

5401. INTERNATIONAL ECONOMICS. (4 cr, \$5431; not open to economics majors; prereq 1001, 1002 or equiv)

The case for free trade. Effects of tariffs; protection of infant industries; common markets. Balancing international receipts and payments, the role of exchange rates, international monetary reform.

5431. INTERNATIONAL ECONOMICS. (4 cr, \$5401; prereq 3102, 3103 or equiv or #)

For description, see 5401.

5431H. HONORS COURSE: INTERNATIONAL ECONOMICS. (5 cr; prereq 3101, 3102, 3103, 1 qtr calculus; B avg recommended)

5461f-5462w-5463s. INTERNATIONAL TRADE AND PAYMENTS THEORY. (5 cr per qtr [no grad cr]; prereq 3102, 3103, Math 3211 or equiv, #; 1 qtr linear algebra recommended)

Gains from trade; effect of trade on factor prices; tariffs; customs unions. Relation of trade theory to growth and development. Balance of payments disequilibrium, exchange rates, capital movements, international liquidity.

Labor Economics

3501. LABOR ECONOMICS. (4 cr, \$5531; not open to economics majors; prereq 1001, 1002 or equiv)
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. ECONOMICS SECURITY. (4 cr, \$Ins 3210; prereq 1001, 1002 or equiv)
Public and private approaches to problems of economic insecurity. Economic and social implications of private and public programs. Emphasis on economics of income and employment stabilization rather than upon legal or administrative aspects.

5535. HEALTH ECONOMICS. (4 cr; prereq 3101...or grad and one course in microeconomics)
Demand for health and medical care. Health insurance. Supply of health personnel. Productivity, economics of scale. Financing medical education. Hospital economics. The market for physicians' services. Can competition work?

Industrial Organization, Technological Change, Environmental Control, Urban Problems

3601. INDUSTRIAL ORGANIZATION AND ANTITRUST POLICY. (4 cr, \$5631; not open to economics majors; prereq 1001, 1002 or equiv)
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. POLLUTION CONTROL AND RESOURCE ECONOMICS. (4 cr; prereq 3101 or 3105)
Pollution as an external diseconomy; use of taxes and subsidies to reduce pollution. Replenishable resources; maximum sustainable yield; role of discount rate; taxation to protect yields and minimize harvesting costs. Nonreplenishable resources; controlling rates of depletion.

5621. ECONOMICS OF URBAN PROBLEMS. (4 cr; prereq 3101 or equiv)

Unemployment and central city decay. Minimum guaranteed income proposals. Low income housing policies. Public policies toward health care. Financing public education. Fiscal problems of cities. Mass transit issues.

5621H. HONORS COURSE: ECONOMICS OF URBAN PROBLEMS. (5 cr; prereq 3101, 1 qtr calculus, 1 qtr statistics...B avg recommended)

5623. HOUSING MARKETS AND PUBLIC POLICY. (4 cr; prereq 1001, 1002 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 ANTITRUST POLICY. (4 cr, \$3601; prereq 3103)
For description, see 3601.

5631H. HONORS COURSE: INDUSTRIAL ORGANIZATION AND ANTITRUST POLICY. (5 cr; prereq 3101, 3103, 1 qtr calculus; B avg recommended)

Monetary Economics and Macroeconomic Policy

3701. MONEY AND BANKING. (4 cr, \$5701, \$5721; not open to economics majors; prereq 1001, 1002 or equiv)
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 3102 or equiv)
For description, see 3701.

5721H. HONORS COURSE: MONEY AND BANKING. (5 cr; prereq 3101, 3102, 1 qtr calculus; B avg recommended)

5731. MACROECONOMIC POLICY. (4 cr; prereq 3102)
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, 1 qtr calculus; B avg recommended)

Major Requirements and Course Descriptions

5733-5734-5735. INTERTEMPORAL ECONOMICS AND MONEY. (4 cr per qtr; prereq 3101, 3103, Math 1231)

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. 5735: Topics in monetary history: selected historical episodes to be interpreted in light of theories studied in 5733 and 5734.

5741. BUSINESS CYCLES. (4 cr; prereq 3102, 5721 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, 5721, 1 qtr calculus; B avg recommended)

Public Finance

3801. ELEMENTS OF PUBLIC FINANCE. (4 cr, §5821; not open to economics majors; prereq 1001, 1002 or equiv)

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)

For description, see 3801.

5821H. HONORS COURSE: ELEMENTS OF PUBLIC FINANCE. (5 cr; prereq 3101, 3103, 1 qtr calculus; B avg recommended)

5831. COST-BENEFIT ANALYSIS. (4 cr; prereq 3101, 3103)

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 or 3105, 3103, 1 qtr calculus; B avg recommended)

Directed Study

3960. TOPICS IN ECONOMICS. (4 cr per qtr; prereq 1001, 1002 [others may be stated in *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.

5970. DIRECTED STUDIES. (Cr ar; prereq #)
For description, see 3970.

College of Education

CLA students may take up to 16 credits of course work offered by other colleges. The credits may be applied toward CLA degrees, but may not be used to fulfill group distribution 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*, Kent Bales, 207 Lind Hall; *Assistant Chair*, Joel Weinsheimer, 207 Lind Hall; *Director of Graduate Study*, Michael Hancher, 205 Lind Hall; *Director of Undergraduate Study*, Toni McNaron, 204 Lind Hall; *Undergraduate Adviser*, Beverly Atkinson, 204 Lind Hall

Professors: Anderson, Bales, Browne, Burns, Clayton, Firschow, Fruman, Furia, Garner, Griffin, Hancher, Hurrell, Kendall, MacLeish, Madden, McNaron, Mitchell, O'Brien, Reed, Ross, Roth, Savage, Spregnether, Stekert, Unger, Weinsheimer, G. T. Wright

Associate Professors: Bridwell, Brown, M. Durham, Escure, Geffen, Haley, Hampl, Hirsch, Leyasmeyer, Solotaroff, Sugnet, J. Wright

Assistant Professors: Anson, L. Durham, Luke, Messer-Davidow, Mowitt, Przybylowicz, Ward

English department courses examine major literary works written as works of art, and consider such topics as the place of these major works within western cultural traditions, theories of art, literary forms and techniques, and the relation of such disciplines as psychology, philosophy, history, and anthropology to literary study and language study. Courses in composition and practical criticism provide intensive practice in writing. All courses are designed to help students develop skills in rhetorical technique and critical reading.

General Information—Course information is available in the Undergraduate Studies office, 204 Lind Hall. Book lists for each course and descriptions of topics and figures courses in English and American literature are available in both 204 and 207 Lind.

B. A. Major Sequence

Required Preparatory Course—3009

Major Requirements—Twelve 4-cr courses in English or composition (beyond those taken to satisfy the CLA composition requirement): 11 at the 3xxx- or 5xxx-level, at least three at the 5xxx-level. (Three courses may be graded S.) Courses in the following categories; each course may be counted in one category only:

One course in Shakespeare (3241 or 3242 or 3243)

Two courses in English or American literature before 1800

Two courses in English or American literature after 1800

One course in English language or literary theory (may not include 3718)

One junior-senior seminar (3960 or 3960H) or English quarter (3931-3932)

Five elective courses.

Major Project: Major paper written in conjunction with 3960 or 3960H or 3931-3932, according to the guidelines in the English Major Handbook, available in the undergraduate studies office.

One 4 cr course with a D grade is allowed to count in the major if a student's major courses are all graded A-F and the upper-level GPA is at least 2.0.

Independent study credits are limited to 12 and no more than 4 independent study credits may be at the 3xxx- or 5xxx-level.

Minor Sequence

Required Preparatory Course—3009

Minor Requirements—Six 4 cr courses in English or Composition (beyond those taken to satisfy the CLA composition requirement) at the 3xxx- or 5xxx-levels (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 (may not include 3718)

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.

1013. FAMOUS ENGLISH AND AMERICAN POEMS. (4 cr)

Shorter poems by English and American poets, from the Renaissance to the present. Introduction to poetry; poems 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.

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: Dylan Thomas, Robert Frost, Marianne Moore, W. B. Yeats, Thomas Hardy, e. e. cummings.

1018. INTRODUCTION TO MODERN FICTION. (4 cr)

Critical discussion of and writing about selected modern novels and stories. Typical authors: Conrad, Lawrence, Joyce, Woolf, Hemingway, Faulkner, Nabokov.

1019H. 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.

Major Requirements and Course Descriptions

1020 or 1030. INTRODUCTION TO LITERATURE: TOPICS. (4 cr)

Topics specified in the *Class Schedule*; course descriptions available before registration from the Undergraduate Studies office.

1069. GREAT PLAYS. (4 cr)

World's great plays, from ancient Greece to contemporary culture, representing a variety of countries, periods, and theatrical modes. Common features and diverse dramatic forms and styles, characterizing the range of Western drama.

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 Afro-American, American Indian, Asian American, and Chicano/Chicana writers. Examination of relevant social factors.

1621. INTRODUCTION TO WOMEN WRITERS. (4 cr)

Several major women writers from Great Britain and the United States. Novels, short stories, poetry, and drama.

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, Welty, Faulkner.

3009. THE STUDY OF LITERATURE. (4 cr; pre-req two courses in English)

Problems of interpretation and criticism. Questions of meaning, form, authority, literary history, social significance. Required for the English major and minor.

3111, 3112, 3113. SURVEY OF ENGLISH LITERATURE. (4 cr per qtr)

Historical survey of major figures, movements, and trends in English literature. *3111*: Chaucer to Marvell, including Spenser, Shakespeare, and Donne. *3112*: Milton to Johnson, including Dryden, Swift, and Pope. *3113*: Blake to Yeats, including Wordsworth, Coleridge, Keats, Tennyson, and Browning.

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.

3218. MEDIEVAL LITERATURE IN TRANSLATION. (4 cr)

Art of narrative in European Middle Ages. Typical readings: *Lives of the Fathers*, *Beowulf*, *Song of Roland*, *Nibelungenlied*, *Tristan, Njal's Saga*, *Troilus and Criseyde*.

3238. THE EUROPEAN RENAISSANCE IN ENGLAND. (4 cr)

Masterpieces of Elizabethan literature compared with works by continental figures such as Ariosto, Erasmus, Michelangelo, 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.

3243. SHAKESPEARE: MAJOR AND REPRESENTATIVE PLAYS. (8 cr, §3241, §3242; two consecutive meetings two or three times per wk)

Concentrated study of approximately 10-12 plays, including those required in 3241 and 3242.

3251, 3252. THE KING JAMES BIBLE AS LITERATURE. (4 cr per qtr)

3251: The Old Testament and literary tradition. The historical narratives, prophets, psalms, and wisdom literature. *3252*: The Book of Daniel, the Apocrypha, the New Testament as documents in the history of literature.

3355, 3356, 3357. MODERN BRITISH LITERATURE. (4 cr per qtr)

Historical survey of important authors, intellectual currents, movements, conventions, genres, and themes. *3355*: 1885-1914. Typical authors: Hopkins, Housman, Hardy, Wells, Bennett, Conrad, Shaw, Synge, and early Yeats. *3356*: 1914-1939. Typical authors: later Yeats, Eliot, Woolf, Joyce, Lawrence, Huxley, Waugh, Auden, and Thomas. *3357*: 1939-1975. Typical authors: Cary, Greene, Murdoch, Fowles, Beckett, Osborne, Pinter, Stoppard, Hughes, and Larkin.

3390. MAJOR BRITISH WRITERS. (4 cr per qtr [12 cr max])

One, two, or three major and representative writers, as specified in the *Class Schedule*. Typical figures: Spenser, Donne, Pope, Swift, Austen, Wordsworth, Dickens, Woolf, and Lawrence.

3410. MAJOR AMERICAN WRITERS. (4 cr per qtr [12 cr max])

One, two, or three major and representative writers, as specified in the *Class Schedule*. Typical figures: Poe, Whitman, Dickinson, Twain, Crane, Frost, Cather, Fitzgerald, Faulkner.

3411, 3412, 3413. SURVEY OF AMERICAN LITERATURE. (4 cr per qtr)

Historical survey of important authors, 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, Cather, Faulkner, Welty, Bellow.

3481. AMERICAN FOLKLORE. (4 cr)

Regional, occupational, and ethnic traditions of the United States; the diversity and "American" qualities of expressive traditional folk behavior.

3591. INTRODUCTION TO AFRO-AMERICAN LITERATURE. (4 cr; §Afro 3591)

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

3592. INTRODUCTION TO AFRO-AMERICAN LITERATURE: BLACK WOMEN WRITERS. (4 cr, §Afro 3592)

Literary tradition of Afro-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, Eliot, Gaskell, Jewett.

3635. AUTOBIOGRAPHY. (4 cr)

Autobiography as a literary form; its history, purposes, techniques, and variety. Five or more well-known examples of the genre.

3671. THE NOVEL. (4 cr)

The novel as a literary form. Readings of selected works of fiction from the 18th century to the present.

3710. TOPICS IN LITERARY CRITICISM. (4 cr per qtr [12 cr max])

Topics specified in the *Class Schedule*.

3718. PRACTICAL CRITICISM. (4 cr; prereq 1009 or equiv, two literature courses or Δ)

The practice of literary criticism examined through class discussion and writing of papers on works of English and American literature; some attention to critical techniques, approaches, and terminology.

3851. THE ENGLISH LANGUAGE. (4 cr, §5851)

The English language including English grammars, phonetics and phonology, British and American dialects, and native-language acquisition.

3852. ASPECTS OF THE ENGLISH LANGUAGE. (4 cr)

Phonetics, morphology, syntax, speech acts, regional and social varieties of English, and application of linguistics to analysis of specific literary texts.

3910 or 3920. TOPICS IN ENGLISH AND AMERICAN LITERATURE. (1-4 cr per qtr)

Topics specified in the *Class Schedule*.

3910H. HONORS COURSE: TOPICS IN ENGLISH AND AMERICAN LITERATURE. (4 cr;

prereq consent of English undergrad adviser and English honors adviser)

Topics specified in the *Class Schedule*.

3931-3932. ENGLISH QUARTER. (8 cr per course; both courses are taken in 1 qtr; prereq Δ)

Study of a broad topic of literary investigation crossing and integrating several areas of study. Team taught.

3940 or 3950. FIGURES IN ENGLISH AND AMERICAN LITERATURE. (1-4 cr per qtr)

Figures specified in the *Class Schedule*.

3960. JUNIOR-SENIOR SEMINAR. (4 cr per qtr; prereq English major status, jr or sr or Δ)

Intensive study of a major literary topic, figure, period, or genre. Designed primarily for majors and honors candidates in English. Topic specified in *Class Schedule*.

3960H. HONORS COURSE: JUNIOR-SENIOR SEMINAR. (4 cr per qtr; prereq jr or sr English major, or Δ)

For description, see 3960.

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 #)**5151. 18TH-CENTURY ENGLISH NOVEL.** (4 cr)

Novels by such authors as Defoe, Richardson, Fielding, Smollett, Sterne, and Austen.

5152. 19TH-CENTURY ENGLISH NOVEL. (4 cr)

Novels by such authors as Scott, Dickens, the Brontës, Thackeray, Eliot, and Hardy.

5153. 20TH-CENTURY ENGLISH NOVEL. (4 cr)

Novels by such authors as Conrad, Ford, Joyce, Woolf, Lawrence, Forster, Cary, and Waugh.

5171. ENGLISH DRAMA TO THE TIME OF SHAKESPEARE. (4 cr; prereq 3241 or 3242)

Mystery plays, moralities, interludes, academic and court plays; plays of Kyd, Marlowe, Lyly, Greene, and Peele.

Major Requirements and Course Descriptions

5172. JACOBEAN AND CAROLINE DRAMA.

(4 cr; prereq 3241 or 3242)

Plays of Jonson, Tourneur, Webster, Middleton, Ford, and others.

5173. RESTORATION AND 18TH-CENTURY DRAMA.

(4 cr; prereq 3241 or 3242)

The heroic play, tragedy, comedy of manners, sentimental comedy.

5174. MODERN DRAMA, 1880-1920.

(4 cr) Beginnings of modern realism, naturalism, and expressionism in English and continental drama.

5175. MODERN DRAMA SINCE 1920.

(4 cr) Chief dramatists, English, American, and continental.

5211. OLD ENGLISH (ANGLO-SAXON).

(5 cr) The language to 1150. Readings in prose and poetry. The culture of the Anglo-Saxons.

5212. READINGS IN OLD ENGLISH PROSE AND VERSE.

(4 cr; prereq 5211)

Critical reading of texts; introduction to versification.

5213. BEOWULF.

(4 cr; prereq 5211)

Reading of considerable portions of text.

5215. MAJOR TYPES OF MIDDLE ENGLISH LITERATURE.

(4 cr; prereq 5221)

Middle English readings in romance, lyric, allegory, and devotional prose.

5216. MAJOR 14TH-CENTURY POETS.

(4 cr; prereq 5221)

Readings in Gower, Langland, and the Pearl-poet.

5221. CHAUCER I: THE CANTERBURY TALES.

(5 cr)

Reading *The Canterbury Tales*; Chaucer's language.

Prerequisite to all other courses in Middle English literature (5215-5222).

5222. CHAUCER II: TROILUS AND CRISEYDE.

(4 cr; prereq 5221 or equiv)

Troilus and selections from the shorter poems.

5230. SPECIALIZED STUDIES IN RENAISSANCE LITERATURE AND CULTURE.

(4 cr per qtr)

Topics specified in the *Class Schedule*.

5233. TUDOR AND ELIZABETHAN POETRY.

(4 cr)

Sixteenth-century poets including Wyatt, Surrey, Spenser, Sidney, Shakespeare, Greville.

5240. ADVANCED SHAKESPEARE.

(4 cr per qtr [12 cr max]; prereq 3241, 3242, or 3243 or #)

Intensive study of a few works, extensive readings on particular topics. Course content varies with the term and instructor.

5255, 5256. 17TH-CENTURY PROSE AND POETRY TO 1660.

(4 cr per qtr)

5255: Bacon and Jonson to Burton and Herrick. 5256: Herbert and Browne to Marvell and Felltham.

5258. METAPHYSICAL AND CAVALIER POETRY.

(4 cr)

Selected poems by John Donne, Ben Jonson, and their successors in the 17th century (e.g., Herbert and Marvell, Herrick, Suckling).

5261. MILTON.

(4 cr)

Paradise Lost, *Samson Agonistes*, minor poems, *Areopagitica*, and often *Paradise Regained*.

5280. MAJOR RESTORATION AND 18TH-CENTURY WRITERS.

(4 cr per qtr [12 cr max])

Authors vary, as specified in the *Class Schedule*.

5311, 5312, 5313. ROMANTIC WRITERS.

(4 cr per qtr)

One, two, or three writers examined each quarter, as specified in the *Class Schedule*.

5331, 5332, 5333. VICTORIAN STUDIES.

(4 cr per qtr)

The impact of revolutionary changes—social, religious, technological, aesthetic—upon English Victorian culture (1830-1900) as evidenced in the works of such writers as Dickens, Tennyson, Carlyle, Ruskin, Browning, Arnold, and Hardy. For a list of the authors covered, see the *Class Schedule*.

5351. 20TH-CENTURY BRITISH POETRY.

(4 cr)

Major figures; historical and intellectual background; poetic theory. Includes such figures as Hardy, Housman, Hopkins, Yeats, Eliot, Auden, Thomas, Larkin, and Hughes.

5354. CONTEMPORARY BRITISH LITERATURE.

(4 cr)

Important authors, intellectual currents, movements, conventions, genres, and themes since 1950.

5361. W. B. YEATS.

(4 cr)

5363, 5364. JAMES JOYCE. (4 cr per qtr)
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 *Finnegans Wake*.

5365. T. S. ELIOT.

(4 cr)

5414. CONTEMPORARY AMERICAN LITERATURE.

(4 cr)

Important authors, intellectual currents, movements, conventions, genres, and themes since 1940.

5431, 5432. AMERICAN POETRY.

(4 cr per qtr)

Major figures; historical and intellectual background; poetic theory. 5431: Beginnings to 1890. Typical authors: Taylor, Poe, Whitman, Bryant, Dickinson. 5432: Since 1890. Typical authors: Frost, Stevens, Pound, Eliot, Moore, Williams.

5451, 5452. AMERICAN NOVEL.

(4 cr per qtr)

5451: Through the 19th century. Typical authors: Cooper, Hawthorne, Melville, Stowe, Twain, James. 5452: Late 19th and 20th centuries. Typical authors: James, Dreiser, Cather, Hemingway, Fitzgerald, Faulkner.

5471. AMERICAN DRAMA. (4 cr)

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)

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. Folk customs, festivals, heroes, humor and medicine. *5483*: Training in collection of folklore materials.

5486, 5487. ANGLO- AND AFRO-AMERICAN FOLKSONG. (4 cr per qtr; prereq 5486 or # for 5487)

5486: Basic elements of the folksong with emphasis on how the folksong changes over time and space; concentration on such genres as ballads, blues, broadsides, lyrics, and sentimental and topical songs. *5487*: How Anglo-American and Afro-American folksong influenced one another and, ultimately, the "folksong revival."

5513, 5514. EARLY AMERICAN LITERATURE. (4 cr per qtr)

5513: To the Revolutionary period. *5514*: The Revolutionary period through the first third of the 19th century.

5530. EARLY 19TH-CENTURY AMERICAN WRITERS. (4 cr per qtr [12 cr max])

One, two, or three major and representative figures, as specified in the *Class Schedule*. Typical figures: Hawthorne, Emerson, Poe, Melville, Thoreau.

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

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

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

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

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

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

5597. HARLEM RENAISSANCE. (4 cr; §Afro 5597)

A multi-disciplinary 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, and Marcus Garvey.

5610. 20TH-CENTURY WRITERS. (4 cr per qtr)
Authors specified in the *Class Schedule*.**5620. BRITISH AND AMERICAN WOMEN WRITERS.** (4 cr per qtr [16 cr max])

Readings in works of one or more women writers, perhaps examining various times within various forms. Writers specified in the *Class Schedule*.

5632. ROMANTIC TRADITION. (4 cr)

Writers of the romantic period and of the 18th or 20th centuries. The evolution of romanticism or its continuation into the 20th century.

5651, 5652. TECHNIQUES OF POETRY. (4 cr per qtr)

5651: Form and sound; meter, stanza, euphony, free verse. *5652*: Figurative language, diction, syntax, imagery, metaphor.

5671. THEORY OF THE NOVEL. (4 cr)

Readings in theoretical criticism of the novel with application to selected British and American fiction.

5672. TECHNIQUES OF THE MODERN AND CONTEMPORARY NOVEL. (4 cr)

Readings in works of such writers as Joyce, Woolf, Faulkner, Nabokov, Pynchon, Barth, and, occasionally, European or Latin-American writers.

5711. CLASSICS OF LITERARY CRITICISM. (4 cr)

Major works in the classic critical tradition. Aristotle and Coleridge and such authors as Plato, Horace, Longinus, Sidney, Dryden, Johnson, Hume, and Eliot.

5712. LITERARY CRITICISM: PLATO TO DRYDEN. (4 cr)

Basic texts in Greek and Roman criticism, in English translation; their original meanings and their influence on later tradition. Representative texts of English neoclassical criticism up to 1700.

5713. LITERARY CRITICISM: POPE TO ELIOT. (4 cr; prereq 5712 or #)

English and American criticism from 1700 to the modern period.

5714. MODERN AND CONTEMPORARY CRITICAL THEORY. (4 cr)

Modern and "postmodern" literary criticism—contemporary movements, theory, and practice.

5753. LITERATURE AND THE OTHER ARTS. (4 cr)

Informal exploration of relationships of literature to theatre, music, painting, sculpture, and architecture: how they influence one another and how their aesthetic and social roles are similar and different. Readings in English and American literature and in aesthetic theory; recordings; gallery visits.

5815. HISTORY OF ENGLISH LANGUAGE. (4 cr)

Development of the English language from Old to Early Modern English: phonology, morphology, and syntax.

Major Requirements and Course Descriptions

5821. OLD AND MIDDLE ENGLISH DIALECTS. (4 cr; prereq 5851 or #)

Dialect differentiation in Old and/or Middle English, based on phonemic-graphemic theory with some attention to generative theory; close textual analysis of dialect examples.

5831. AMERICAN ENGLISH. (4 cr)
History of the English language in the United States; significant regional variation.

5843. AMERICAN SOCIAL DIALECTS. (4 cr)
Methods for and results of investigating social and class variation in American English; urban dialects.

5851. STRUCTURE OF MODERN ENGLISH. (4 cr, §3851)
Modern English grammar: phonology, syntax, and semantics; variations and change.

5860. STUDIES IN THE ENGLISH LANGUAGE. (4 cr per qtr; prereq 5851 or #)
Topic (English phonology, syntax, or semantics) specified in the *Class Schedule*.

5871. THE LANGUAGE OF LITERATURE. (4 cr)
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 or 5920. TOPICS IN ENGLISH AND AMERICAN LITERATURE. (1-4 cr per qtr)
Topics specified in the *Class Schedule*.

5940 or 5950. FIGURES IN ENGLISH AND AMERICAN LITERATURE. (1-4 cr per qtr)
Figures specified in the *Class Schedule*.

Creative Writing

1101. INTRODUCTION TO FICTION WRITING. (4 cr per qtr; prereq fulfillment of writing practice requirement)
Principles of composition in the art of fiction.

1104. INTRODUCTION TO POETRY WRITING. (4 cr per qtr; prereq fulfillment of writing practice requirement)
Workshop for beginning students. Discussion of student poems, assignments, formal experiments. No manuscript prerequisite.

3101. INTERMEDIATE FICTION WRITING. (4 cr)
For those with experience in writing fiction. Discussion of students' works, texts, assignments, and experiments.

3104. INTERMEDIATE POETRY WRITING. (4 cr)
For those with experience in writing poetry. Discussion of students' works, texts, assignments, and experiments.

5100. ADVANCED NONFICTION WRITING. (4 cr per qtr [16 cr max]; prereq Δ)
For students with experience in nonfiction writing. The critical review, the essay as a literary form; copy editing, and technical editing and writing. Topics announced in the *Class Schedule*.

5101, 5102, 5103. ADVANCED FICTION WRITING. (4 cr per qtr; prereq # or Δ)
For students with considerable experience in writing fiction.

5104, 5105, 5106. ADVANCED POETRY WRITING. (4 cr per qtr; prereq # or Δ)
For students with considerable experience in writing poetry.

5108, 5109. MEMOIR WRITING. (4 cr per qtr; prereq # or Δ)
Autobiographical prose writing. Students will read numerous memoirs, consider aspects of memory and imagination and the memoir genre, as well as write their own autobiographical pieces. Emphasis on reading as well as writing. Many suggested exercises, most taken from class readings.

5970. DIRECTED STUDY IN WRITING. (1-4 cr; prereq #)
Projects in writing poetry, fiction, drama, and nonfiction, or study of ways to improve writing.

Composition and Communication (Comp)

Staff—Director, Donald Ross, 209 Lind Hall

Professor: Ross

Associate Professors: Bridwell, Brown

Assistant Professor: Anson

CLA and most other colleges of the University require all students to satisfy a writing practice requirement and to complete a 3xxx-level course in their junior or senior years.

Writing Practice Requirement—Students fulfill this requirement through successful completion of Comp 1011 or 1012. 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—To register for any writing practice course, you must present 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 1012.

Category 3—Must take Comp 1011.

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 obtaining transfer credit, selecting appropriate courses, or referral for testing.

Students exempted from a freshman composition requirement at another college should consult the Composition office, 209 Lind, for evaluation.

Upper-Level Writing Course (3011-3085)—Students in most colleges and CLA departments must complete one 3xxx-level 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 will be advised to take an intermediate-level course or to go to the Writing Service to gain additional experience.

Students absent the first day will lose their places in class. Permission of the Program in Composition is required to register after the first class.

Creative writing 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 English Composition with the designation "ESL only." Questions regarding English placement should be directed to the Program in English as a Second Language, 175 Klaeber Court.

Writing Service—The Program in Composition offers individual instruction without charge to all University students. Students who wish to develop their writing skills are invited to consult the service; faculty members in any department may advise their students to do so. Further information is available in the Composition office, 209 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; S-N only; prereq assignment to Category 4...# after 1st day of class)

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.

1012. WRITING PRACTICE AND LITERATURE. (4 cr; prereq assignment to Category 2)

Essentially the same as 1011, except that literature serves as basis for discussion and writing assignments. *Not* an introduction to literature or literary studies.

1013. WRITING PRACTICE II. (1-4 cr; S-N only; prereq grade of X in 1011 or 1012)

Intensive work on individual writing problems. Number of credits and curriculum determined by assessment. Students should register for four credits.

Major Requirements and Course Descriptions

1027. INTERMEDIATE EXPOSITORY WRITING. (4 cr; prereq fulfillment of writing practice requirement...students who matriculated before fall 1982 must have completed 1001, Comm 1001 or equiv) Mastery of expository forms (e.g., comparison, analysis, evaluation); control of tone and diction to achieve a clear, accurate style.

3011. WRITING ABOUT LITERATURE. (4 cr; prereq fulfillment of writing practice requirement, jr) Developing a critical argument about literary texts (novels, poems, plays) with attention to use of secondary sources. Experiments with different modes of explication and criticism.

3012. WRITING IN THE HUMANITIES. (4 cr; prereq fulfillment of writing practice requirement, jr) Effective analysis and argument including proper ways to present and paraphrase texts from such fields as philosophy, history, social work, and anthropology. May include a research paper.

3013. WRITING FOR ARTS OTHER THAN LITERATURE. (4 cr; prereq fulfillment of writing practice requirement, jr) Description of painting, sculpture, music, and other art forms as basis for analysis and generalization. Includes reviews and criticism, and use of others' commentaries on the arts.

3014. WRITING FOR THE QUANTITATIVE SOCIAL SCIENCES. (4 cr; prereq fulfillment of writing practice requirement, jr) Developing strategies for expressing quantitative and statistical information in clear prose, and exercises in effective ways to describe individual case histories. Includes analysis of complex situations and institutions.

3015. WRITING ABOUT SCIENCE. (4 cr; prereq fulfillment of writing practice requirement, jr) Presentation of problems in science and mathematics in clear expository prose. Writing for expert and non-expert audiences. Emphasis on how to integrate theoretical explanations and empirical evidence.

3027. ADVANCED EXPOSITORY WRITING. (4 cr; prereq fulfillment of writing practice requirement, jr) Narration, description, proof, and persuasion; proper framing of arguments and analysis; use and evaluation of sources for longer papers.

3031. TECHNICAL WRITING FOR ENGINEERS. (4 cr; prereq fulfillment of writing practice requirement, jr) Focus on form and style of technical writing in reports, documentation, and correspondence. Exercises and practical examples, tied as much as possible to students' major fields.

3032. PREPROFESSIONAL WRITING FOR BUSINESS. (4 cr; prereq fulfillment of writing practice requirement, jr) Rhetoric, form, and style of business writing in reports, case studies, and correspondence. Exercises and practical examples, tied as much as possible to students' major fields.

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 *Class Schedule*.

3080. SPECIAL PROJECTS IN ADVANCED COMPOSITION. (2 cr per qtr [6 cr max]; S-N only; prereq fulfillment of writing practice requirement, jr, permission of major adviser, Δ) Writing conferences for individual students, in cooperation with their major departments.

3085. CONFERENCE COURSE IN ADVANCED COMPOSITION. (1-4 cr; prereq fulfillment of writing practice requirement, jr, permission of major adviser, Δ)

Writing conferences for individual students; lectures and discussion sessions, in cooperation with students' major departments.

English as a Second Language

See Linguistics.

Film Studies

Staff—Chair of Minor Committee, Rob Silberman (Art History), 12 Jones Hall
Minor Committee: Bensmaia (Comparative Literature), Conley (French and Italian), Mishler (Scandinavian), Schwartz (Journalism)

The minor in film studies offers students the opportunity to examine film from aesthetic, historical, political, social, technical, and theoretical perspectives.

Minor Sequence

Required Preparatory Course—ArtH/CLit 1921

Minor Requirements—ArH 3921-3922, CLit 5221, Jour 5615, and two additional 3xxx- or 5xxx-level courses selected from approved electives. The minor program must be approved by a member of the Minor Committee.

Finnish

See Scandinavian.

Foreign Study (FoSt)

Coordinator, Chip Peterson, 260 Social Sciences Building (624-4525)

You can earn academic credit applicable toward a University degree, or toward

a minor in foreign study, for a variety of study abroad experiences. Some opportunities carry University residence credit, but you are also encouraged to consider non-University opportunities before choosing a particular experience.

Advising—Two offices play major roles in study abroad advising. For help in selecting a study abroad opportunity, you should request an appointment at the International Study and Travel Center (ISTC), 44 Coffman Memorial Union (625-1150), and consult the large collection of brochures and catalogs available in the ISTC library. For 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) you should request an appointment at the Foreign Studies Office, 260 Social Sciences Building (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 predeparture 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-level cr in course work focusing on the country of study; at least one course must be in humanities (literature, art history, etc.) and one in history or a social science, and at least one must be taken before departure, one after your return.

The foreign studies minor is designed to help students integrate their study abroad with supporting University course work. Because several of the required courses should be taken before departure, careful advance planning is essential. A more detailed explanation of require-

ments, guidance concerning course selection, and minor application forms are available in the Foreign Studies office.

Programs Offered by CLA Departments

Several CLA departments sponsor study abroad programs for which students receive residence credit. To participate in these programs, you register for three or four approved CLA courses. Those programs offered regularly appear on the following list. Most are administered by the Extension Classes Office of Study Abroad (ECOSA), 202 Westbrook Hall (625-3379)—direct inquiries to this office. Information about these programs as well as other special offerings can be obtained at ISTC.

GERMAN LANGUAGE/AUSTRIAN STUDIES IN GRAZ. (12-13 cr; prereq #)

Fall quarter in Graz, Austria, cosponsored by Department of German, Center for Austrian Studies, and ECOSA; led by University of Minnesota faculty. Intensive language instruction, culture courses, and field trips. May be applied to CLA language requirement.

SPANISH IN CUERNAVACA. (12-14 cr; prereq #)

Winter quarter in Cuernavaca, Mexico, cosponsored by Department of Spanish and Portuguese and ECOSA; led by University of Minnesota faculty. Intensive language instruction, culture study, and field trips. Home stay experience. May be applied to CLA language requirement.

ANTROPOLOGY IN MEXICO. (12-13 cr; prereq #)

Winter quarter in Cuernavaca, Mexico, cosponsored by Department of Anthropology and ECOSA; led by University of Minnesota faculty. Prehistoric archaeology, peoples, and cultures of Middle America, and Spanish language courses. Offered alternate years with Studio Arts in Mexico. May be applied to the CLA language requirement.

STUDIO ARTS IN MEXICO. (11-13 cr; prereq #)

Winter quarter in Cuernavaca, Mexico, cosponsored by Department of Studio Arts and ECOSA; led by University of Minnesota faculty. Pre-Hispanic and contemporary Mexican folk art provides source material for studio arts studies. Spanish language instruction. May be applied to CLA language requirement. Graduate credit available.

LITERATURE IN LONDON. (12-16 cr; prereq #)

Spring quarter in London, England, cosponsored by Department of English, Department of Theatre Arts, and ECOSA; led by University of Minnesota faculty. Historical, geographical, and cultural perspectives on study of literature and drama. Graduate credit available.

Major Requirements and Course Descriptions

SWEDISH IN VÄXJÖ. (15-16 cr; prereq #)

Spring quarter in Växjö, Sweden, cosponsored by Department of Scandinavian and ECOSA; led by University of Minnesota faculty. Intensive language instruction, culture study, and field trips. May be applied to CLA language requirement.

FRENCH IN MONTPELLIER. (12-16 cr; prereq #)

Spring quarter in France, cosponsored by Department of French and Italian and ECOSA; led by University of Minnesota faculty. Intensive language instruction, culture courses, and field trips. May be applied to CLA language requirement.

POLISH IN LUBLIN. (9 cr; prereq #)

Summer term at Marie Curie-Skłodowska University in Lublin, Poland, cosponsored by Department of Russian and East European Studies and ECOSA; led by University of Minnesota faculty. Intensive language instruction, culture courses, field trips. May be applied to the CLA language requirement.

SALZBURG SUMMER SCHOOL. (7.5 cr; prereq #)

Six-week summer intensive language program in Salzburg, Austria, cosponsored by the German department, the Center for Austrian Studies, and ECOSA. Language courses at all levels, credited through University registration and applicable to CLA language requirement (see German).

SUMMER INTENSIVE CHINESE LANGUAGE INSTITUTE. (5-15 cr; prereq #)

Summer study of second, third, or fourth year Chinese at Nankai University, Tianjin, People's Republic of China. Optional two-week tour following institute. Possibility of continuing study during academic year, subject to Nankai approval.

CIEE Programs Cosponsored by CLA Departments

Several CLA language departments actively contribute to the governance of study abroad programs sponsored by the Council on International Educational Exchange (CIEE). To participate in these programs for residence credit, you register for existing CLA courses comparable to those to be taken abroad. Inquiries should be directed to the appropriate language department.

CIEE LANGUAGE/CULTURE PROGRAM IN BRITANNY. (1-54 cr; prereq #)

See Fren 3800.

CIEE CONTEMPORARY FILM PROGRAM IN PARIS. (1-54 cr; prereq #)

See Fren 5800.

CIEE LIBERAL ARTS PROGRAM, SEVILLE, SPAIN. (18-50 cr; prereq #)

Semester or year of study at University of Seville under supervision of a CIEE director; preceded by one-month, on-site, intensive language practice. Courses taught in Spanish by Seville faculty. Offerings in social sciences, art history, Spanish language and literature.

CIEE LANGUAGE/SOCIETY PROGRAM, SEVILLE, SPAIN. (25 cr; prereq #)

Semester study at University of Seville under supervision of a CIEE director. Courses taught in Spanish by Seville faculty at University's off-campus center for specialized education. Curriculum includes required language plus selected liberal arts courses; intensive language instruction first month.

CIEE LANGUAGE/AREA STUDIES PROGRAM, ALICANTE, SPAIN. (26 cr; prereq #)

Semester of study at University of Alicante under supervision of a CIEE director. Intensive study of Spanish at beginning and intermediate levels, plus two area studies courses taught in English. All courses taught by Alicante faculty.

CIEE BUSINESS/SOCIETY PROGRAM, SEVILLE, SPAIN. (20-26 cr; prereq #)

Semester study in off-campus facilities of University of Seville's business college. Courses taught in Spanish by Seville faculty. Curriculum includes courses on Spanish business, economy, society, language, plus related field visits. Prerequisites include course work in economics and/or business.

CIEE JAPAN BUSINESS PROGRAM. (8-10 cr; prereq #)

Summer study in Tokyo under supervision of an on-site CIEE director, with instruction in English by Japanese faculty from Seikei University. Program consists of two seminars: Japanese society and Japanese business. Extensive field study included.

CIEE SUMMER RUSSIAN PROGRAM IN LENINGRAD. (12 cr; prereq #)

Six weeks of intensive language study at Leningrad University, with lectures on literature and culture, excursions, and a two-week field trip to other parts of USSR. Instruction by Soviet professors with on-site coordination by CIEE director.

CIEE LANGUAGE/CULTURE SEMESTER IN LENINGRAD. (20-30 cr; prereq #)

Fourteen weeks of intensive language study at Leningrad University, with lectures on literature and culture, excursions, and an 11-day field trip to other parts of USSR. Instruction by Soviet professors with on-site coordination by CIEE director. Available fall or spring.

CIEE SOVIET STUDIES YEAR IN LENINGRAD. (36-54 cr; prereq #)

Academic year in regular Leningrad University classes, taught in Russian, in social sciences or language/literature. Includes special project and research paper, special program of advanced Russian language instruction, excursions, and two-week field trip to other parts of USSR.

Programs Cosponsored by CLA Through the Foreign Studies Program

Through the courses below, you can receive residence credit for a number of study abroad programs sponsored by the Higher Education Consortium for Urban Affairs (HECUA), the Institute of European Studies (IES), and the University of Kansas, as well as for programs in Denmark and Italy, and exchange study at the Universities of Essex or Lancaster in England. Scholarships are available for the IES and Denmark programs. Inquiries concerning all these programs should be directed to the Foreign Studies Office, 260 Social Sciences (624-4525).

1110/3110. HECUA SCANDINAVIAN URBAN STUDIES TERM. (1-24 cr; prereq #)

Introduction to contemporary Scandinavian societies using city as field site and analytical unit 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.

1120/3120. HECUA SOUTH AMERICAN URBAN SEMESTER. (1-24 cr; prereq #)

Study of urbanization, development problems based in Bogotá, Colombia. Field trips to cities in Panama, Colombia, Ecuador, and Peru. Lectures, readings, discussions, structured field experiences. Course work includes Colombian studies, either independent study or intermediate Spanish language. Fall semester.

1130/3130. HECUA LITERATURE, IDEOLOGY, AND SOCIETY IN LATIN AMERICA. (1-24 cr; prereq #)

Literary, artistic perspectives on ideology, social change. Based in Bogotá, Colombia. Field study in Puerto Rico and Nicaragua permits comparative approach. Lectures, readings, discussion—mainly in Spanish—integrated with structured fieldwork. Course work includes advanced Spanish or, by permission, research project. Spring semester.

1210/3210. KANSAS PROGRAM IN COSTA RICA. (1-54 cr; prereq #)

Semester or year study in regular classes at University of Costa Rica under University of Kansas supervision, preceded by month of on-site orientation. Students may choose among wide range of courses in natural sciences, social sciences, humanities.

1220/3220. KANSAS PROGRAM IN ERLANGEN, GERMANY. (1-54 cr; prereq #)

Fall semester or year study in regular classes at University of Erlangen (near Nürnberg) under University of Kansas supervision, preceded by month of on-site orientation. Students may choose among wide range of courses in natural sciences, social sciences, humanities.

1230/3230. KANSAS PROGRAM IN GREAT BRITAIN. (1-54 cr; prereq #)

Year study in regular classes at universities of Exeter, Hull, or Reading (England), Aberystwyth (Wales), or St. Andrews, Stirling, or Strathclyde (Scotland) under University of Kansas supervision. Wide variety of course choices in natural sciences, social sciences, humanities.

1240/3240. KANSAS PROGRAM IN KOREA. (1-54 cr; prereq #)

Semester or year study in special classes at Ehwa Women's University, Seoul, in coeducational program sponsored by University of Kansas. Courses include Korean history/society, Korean arts/humanities, intensive language study at all levels, and independent study project.

1400/3400. IES PROGRAM AT NANZAN UNIVERSITY, JAPAN. (1-45 cr; prereq #)

Academic year or semester study at Center for Japanese Studies, Nanzan University, Nagoya. Sponsored by Institute of European Studies. Japanese language instruction at all levels. Courses on Japan, taught in English, in many disciplines from social sciences, humanities, traditional arts.

1410/3410. IES PROGRAM IN DURHAM, ENGLAND. (1-45 cr; prereq #)

Year study in regular classes at University of Durham under Institute of European Studies sponsorship. Students may choose among wide range of courses in natural sciences, social sciences, humanities.

1420/3420. IES PROGRAM IN LONDON. (1-54 cr; prereq #)

Semester study at Institute of European Studies London Center. Students choose between two tracks: social sciences or humanities. Includes tutorial (social sciences) or interdisciplinary colloquia (humanities). Internships available.

1430/3430. IES PROGRAM IN NANTES, FRANCE. (1-54 cr; prereq #)

Semester or year study in Nantes. Institute of European Studies courses supplemented by opportunities to take regular University of Nantes courses. Wide range of course offerings stress French language, literature, and area studies. Some internships available.

1440/3440. IES PROGRAM IN PARIS. (1-54 cr; prereq #)

Semester or year study in courses offered by Institute of European Studies. Curriculum includes French language and literature, history, political science, economics, art history. Opportunities to take regular courses at Paris universities. Some internships available.

1450/3450. IES PROGRAM IN MADRID. (1-54 cr; prereq #)

Semester or year study in courses offered by Institute of European Studies. Curriculum includes Spanish language and literature, history, and social science studies. Opportunities to take regular University of Madrid courses.

Major Requirements and Course Descriptions

1460/3460. IES PROGRAM IN VIENNA. (1-54 cr; prereq #)

Semester or year study in English at Vienna Center of Institute of European Studies. Curriculum emphasizes arts, East-West studies, business/economics, and required intensive German instruction. Advanced students of German may also take University of Vienna courses. Internships available.

1470/3470. IES PROGRAM IN FREIBURG, GERMANY. (1-54 cr; prereq #)

Semester or year study at University of Freiburg, in regular university courses and/or courses in German studies offered by Institute of European Studies. Tutorials available in some fields.

1480/3480. IES EUROPEAN COMMUNITY PROGRAM IN GERMANY. (1-27 cr; prereq #)

Semester study in English at Institute of European Studies Freiburg Center. Focuses primarily on economics and politics of contemporary Europe and EEC. Related visits to EEC and enterprises affected by EEC policies. All students also study German language.

1490/3490. 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 under auspices of Institute of European Studies. Instruction in English. Wide variety of disciplines available. Emphasis on Asian studies, business/economics. Language courses at all levels in Chinese, Japanese, and Malay.

1610/3610. EXCHANGE STUDY IN BRITISH UNIVERSITIES. (1-54 cr; prereq #)

Year's study in regular classes at University of Essex (in Colchester, southeastern England) or University of Lancaster (in Lancaster, northwestern England). Students may choose among wide range of courses in natural sciences, social sciences, humanities.

1820/3820. DENMARK'S INTERNATIONAL STUDY PROGRAM. (1-54 cr; prereq #)

Semester or year of study in Copenhagen. Three curricula offered: liberal arts, architecture and design (including summer program), international business and economics. Courses taught in English by Danish faculty, mostly from University of Copenhagen. Students also study Danish and live with Danish families.

3810. BOLOGNA COOPERATIVE STUDIES PROGRAM, ITALY. (1-54 cr; prereq #)

Full year's study in broad range of disciplines at University of Bologna, Italy, preceded by six-week intensive orientation program (taught by Bologna faculty) to improve Italian language skills, general cultural knowledge. Sponsored by consortium including universities of Minnesota and Indiana.

Reciprocal Student Exchanges

The University of Minnesota participates in two special exchange programs permitting students to study for a full year in

regular classes at a wide variety of institutions overseas, in exchange for allowing international students to spend a corresponding year of study here. Direct inquiries concerning exchanges to the International Study and Travel Center, 44 Coffman Union (625-1150).

INTERNATIONAL RECIPROCAL STUDENT EXCHANGE PROGRAM. (1-54 transfer cr; prereq #)

Academic/cultural exchange providing for year of scholarship-supported study in wide variety of subjects at universities in China, Germany, Hungary, Iceland, Malaysia, Norway, Tanzania, Tunisia, or Uruguay. Exchange must return to Twin Cities for one year. Open to all undergraduate and graduate students.

INTERNATIONAL STUDENT EXCHANGE PROGRAM. (18-54 transfer cr; prereq #)

Semester or year in regular classes of member universities in Africa, Asia, Middle East, Oceania, Latin America, Europe, Canada. Open to sophomores, juniors, seniors, and graduate students in any field of study, subject to placement and acceptance by host institution. Scholarships available for some sites.

Minnesota Studies in International Development (MSID)

Administrative Official, Joseph Schwartzberg, 473 Social Sciences Building; *Coordinator*, Judee Kleffman, 202 Wesbrook Hall (625-9383)

MSID is an all-University program that places students in development-related internships with institutions in Third World countries. Prior to 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 program or a research program or both.

MSID COLOMBIA INTERNSHIP. (1-12 cr per quarter; prereq #)

Five-month internship beginning in January; shorter periods possible in special circumstances. Interns work with Fundación Social and its affiliated firms and foundations, a non-profit corporate conglomerate designed to promote social change. Lodging with Colombian families. Spanish required.

MSID INDIA INTERNSHIP. (1-12 cr per qtr; prereq #)

Five-month internship beginning in January; shorter periods possible in special circumstances. Interns work in projects of Banaras Hindu University's Centre for Integrated Rural Development. Knowledge of Hindi can be gained in the summer and fall before departure. Housing arranged by MSID.

MSID JAMAICA INTERNSHIP. (1-12 cr per quarter; prereq #)

Individually-designed, three- to six-month internships beginning after course requirements have been met. Interns work in wide variety of agencies/organizations in Jamaica or in Agricultural Extension Service in the Eastern Caribbean. Students arrange own lodging, with local assistance.

MSID KENYA INTERNSHIP. (1-12 cr per quarter; prereq #)

Five-month internship beginning in January; shorter periods possible in special circumstances. Interns work mainly in Nairobi in programs of the Mazingira Institute and other development agencies. Lodging in local student accommodations. Swahili desirable but not required.

MSID SENEGAL INTERNSHIP. (1-12 cr per quarter; prereq #)

Six-month internship beginning in January. Interns work mainly in local Senegalese agencies which engage directly in projects and research of benefit to poor people. Housing arranged by MSID. French required.

SPAN Program

Administrative Official, Theofanis Stavrou, 652 and 646 Social Sciences Building; *Coordinator*, Juliann F.S.P. Geis, 309 Social Sciences Building

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 preparation of a research paper upon return to the campus. SPAN 5960, is open only to those formally admitted to the program; 3001-3002-3003, offered through Extension Classes, is open to others, with permission.

3001f-3002w-3003s. SPAN LANGUAGES, PREPARATION, SOCIETY. (5 cr per qtr; prereq SPAN membership or #)

Intensive study of the language, culture, and society of countries to be visited by SPAN groups; a separate section for each country. For further information, call SPAN office, 309 Social Sciences Building (626-1083) or Professor Stavrou (624-4526).

5960. SEMINAR FOR FOREIGN STUDY. (12 cr; apply to SPAN office, 309 Social Sciences Building, 376-5219, in spring 1 yr prior to summer abroad) Directed field study (SPAN program) in selected foreign countries. Each student studies his or her host country and develops a research project during year preceding summer abroad, and writes comprehensive report upon return.

Toledo International Program

Administrative Official, Antonio Ramos, 31 Folwell Hall; *Coordinator*, Holly Zimmerman, 202 Wesbrook Hall (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 are also offered. Faculty comes from Spanish universities. Residence CLA credit available through Extension Classes.

TOLEDO INTERNATIONAL PROGRAM.

(1-54 cr; prereq #)

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. Because all are listed individually in the Toledo Program bulletin, available from the coordinator, they are not repeated here.

Individualized Study Abroad

You may earn credit for study abroad outside the auspices of University programs through several different mechanisms (consult foreign studies office 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 to the Office of Admissions and Records.
2. Study at an accredited foreign university, whether as a regular student or in a special program for foreigners, generally is accepted for transfer credit by submitting a transcript to the Office of Admissions and Records. This office usually

Major Requirements and Course Descriptions

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 directly (such as a language institute) can earn credit through special examinations offered by the appropriate University academic department.

4. Independent study options are also available. These require approval of and evaluation by an appropriate University faculty member and should be arranged prior to departure for study abroad.

All students who select a program of individualized study should complete a Foreign Study Checklist, available from ISTC or the Foreign Studies Office, and submit it to the coordinator of foreign studies. This checklist records planning, preparation, and agreements with appropriate instructors in order to insure that students' expectations regarding credit are realistic. Students can maintain their status in the University while abroad, including eligibility to receive certain kinds of financial aid, by registering for FoSt 0xx0 through the Foreign Studies Office. For more information, see the brochure *Earning Credit Through Study Abroad*, available from ISTC or the Foreign Studies Office, or contact the coordinator of foreign studies.

0010. STUDY ABROAD. (0 cr; prereq #)

This no-credit registration allows students to maintain their University of Minnesota status while studying abroad less than half-time.

0060. STUDY ABROAD. (0 cr; prereq #)

Same as 0010; for program of more than half-time but less than three-quarter-time study abroad.

0090. STUDY ABROAD. (0 cr; prereq #)

Same as 0010; for program of more than three-quarter-time but less than full-time study abroad.

0120. STUDY ABROAD. (0 cr; prereq #)

Same as 0010; for program of full-time study abroad.

0150. STUDY ABROAD. (0 cr; prereq #)

Same as 0120; for full-time study on International Student Exchange Program (ISEP).

College of Forestry

CLA students may take up to 16 credits of course work offered by other colleges. The credits may be applied toward CLA degrees, but may not be used to fulfill group distribution requirements. Descriptions of courses offered by the College of Forestry can be found in the bulletin of that college.

French and Italian

Staff—Chair, Tom Conley, 200b Folwell Hall; *Director of Undergraduate Studies*, F.R.P. Akenhurst, 200 Folwell Hall; *Director of Graduate Studies*, Eileen Sivert, 200 Folwell Hall

Professors: Akehurst, Conley, Pipa, Renaud, Schneider, Waldauer, Weber
Associate Professors: Barnes, Bensmaia, Brewer, Martinez, Paganini, Robinson, Sivert

Assistant Professor: Preckshot

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 and Ital 1301-1302 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. Ten credits are awarded upon successful completion of each quarter's sequence.

General Education—Fren 3599, 3601, 3602, 3603, 3606, and 3607 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 3555, 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, in the one-quarter accelerated course Ital 3041, or in the two-quarter course Ital 1301-1302.

French and Italian courses FrIt 3590, 3604, 3608, and 5587 have no prerequisites and may be applied to the Route II language requirement.

B.A. Major Sequence—French

Required Preparatory Courses—1101-1102-1103; 1104-1105-1106; 3015

Major Requirements—3016, 3017, 3101, 3103

Two courses selected from: 3511, 3512, 3513

Five additional 3xxx-5xxx courses
5105

Courses 3590, 3599, 3601, 3602, 3603, 3607, and 5607 may not be applied to 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*.

B.A. Major Sequence— French Area Studies

Required Preparatory Courses—1101-1102-1103; 1104-1105-1106; 3015

Major Requirements—3016, 3511, 3512, 3513, 3101, 3103

One course chosen from Anthro 5141, 5161, 5331

Hum 3321, 5301, 5302

Four courses selected from one of the following two areas:

Two courses from Fren 3209, 3219, 3239, 3299 and appropriate 5xxx-level course and two courses from ArtH 3009, 3011, 3303, Hist 3011, 3616, 3624, 5211, Mus 3029, Phil 3001, 3002, 5021

or, two courses from Fren 3107, 3259, 3269, 3289, 3299 and appropriate 5xxx-

level and two courses from Afro 3421, 5301, ArtH 3012, 3465, 3466, Hist 3012, 3013, 3625, 5212, 5231, Hum 3755, 3871, Phil 3004

Senior Seminar: French-Italian 5505.

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; 3015

Major Requirements—3016, 3031, 3201, 3501, 3502, Seven literature courses chosen from 3104-5583

Courses 3555, 3590, 5601, 5602, 5603, and 5609 may not be applied to the Italian major.

B.A. Major Sequence— Italian Area Studies

Required Preparatory Courses—1101-1102-1103; 1104-1105; 3015

Major Requirements—3016, 3031, 3201, 3501, 3502

One course chosen from Anth 5141, 5161, 5331, Hum 3321, 5301, 5302

Three courses from any 3xxx- or 5xxx-level Italian course

Two courses from ArtH 3009, 3011, 5253, 5306, 5307, 5313, 5314, Hist 3001, 3002, 3003, 3621, 3754, 3755, 3756, Mus 5601, 5602

Senior Seminar: French-Italian 5505.

Minor Sequence—Italian

Minor Requirements—Minimum of six courses:

1. 3016, 3031
2. 3501, 3502
3. Two courses chosen from Ital 3104 through 5383

The minor program must be approved by the director of undergraduate studies.

Note: The Italian major and minor are being revised. Current information is available in 200 Folwell Hall.

Major Requirements and Course Descriptions

B.A. Major Sequence— French and Italian

Required Preparatory Courses—Ital
1101-1102-1103; 1104-1105; 3015. Fren
1101-1102-1103; 1104-1105; 3015.

**Major Requirements—Fren 3101, 3103;
Ital 3201; three 3xxx French literature
courses; four Italian literature courses;
FrIt 3590 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; degree credit
granted only if entrance standard met)
Basic listening, speaking, reading, and writing skills.
Stress on communicative competence. Some cultural
readings.

1104f,w,s. INTERMEDIATE FRENCH. (5 cr; pre-
req 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; pre-
req 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; pre-
req 1105)
Continued development of all four language skills.
Provides an integrated presentation of contemporary
French culture to increase student awareness and un-
derstanding of cultural differences.

**3015. FRENCH COMPOSITION AND CONVER-
SATION.** (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, eco-
nomics, 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 lan-
guage in a French milieu. Topics change each quarter.

**3101. INTRODUCTION TO FRENCH LITER-
ARY TEXTS: POETRY.** (4 cr; prereq 3015 or equiv)
Approaches to literary analysis and techniques exam-
ined through critical reading. Aims beyond, but fo-
cuses on, poetry.

3103. FRENCH LITERARY TEXTS: NOVEL.
(4 cr; prereq 3101 or above)
Approaches to literary analysis and techniques exam-
ined through critical reading.

3207. FRENCH LITERARY TEXTS: CINEMA.
(4 cr; prereq 3101, 3103)
Approaches to film analysis and techniques examined
through critical viewings and readings.

**3209. TOPICS IN MEDIEVAL FRENCH LITER-
ATURE.** (4 cr; prereq 3101, 3103)
Selected texts. Taught in French.

**3219. TOPICS IN 16TH-CENTURY FRENCH
LITERATURE.** (4 cr; prereq 3101, 3103)
Selected texts. Taught in French.

3229. FRENCH LITERARY TEXTS: THEATRE.
(4 cr; prereq 3101, 3103)
Approaches to literary analysis and techniques exam-
ined through critical reading.

**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.

**3289. 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 and 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 culture. *3501*: Middle Ages Renaissance.
3502: 17th and 18th centuries. *3503*: 19th and 20th
centuries since the 1789 Revolution.

**3590. TOPICS IN FRENCH AND ITALIAN CIVI-
LIZATION AND CULTURE: RELATED AS-
PECTS.** (4 cr, §FrIt 3590, §Ital 3590)
For description, see FrIt 3590. Taught in English.

**3599. THE CONTEMPORARY SCENE IN
FRANCE.** (4 cr; knowledge of French helpful but not
necessary)
Culture as it has evolved in France since 1955 among
various human sciences. Readings.

**3601, 3602. FRENCH LITERATURE IN EN-
GLISH 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, and others.

3606. CLASSICAL DRAMA IN TRANSLATION: CORNEILLE-MOLIÈRE-RACINE. (4 cr; knowledge of French helpful but not necessary)

Selected plays examined from literary and theatrical points of view. Doctrinal constraints and the material conditions of the age.

3607. CLASSICAL COMEDY: MOLIÈRE IN TRANSLATION. (4 cr, \$5443, \$5607; knowledge of French helpful but not necessary)

Recurrent themes and techniques, nature of comedy, staging problems.

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.

3800. CIEE PROGRAM: BRITTANY. (1-54 cr; French 1105)

Semester or year of study in Rennes, Brittany, France, with emphasis on French language, literature, and civilization. Opportunities to take courses in other disciplines at University of Haute Bretagne for students with advanced language skills.

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq undergrad, Δ)

Guided individual reading or study.

3980. DIRECTED INSTRUCTION. (1-5 cr per qtr; prereq 3015, #, Δ)

5012. STYLISTICS. (4 cr; prereq 3017 or #) Staff Structural dimensions of literary works, principally as they relate to language. A variety of genres and periods. Taught in French.

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.

5219. HUMANISM AND ITALIANISM IN THE LITERATURE OF THE 16TH CENTURY. (4 cr, \$Frit 5219, \$Ital 5219; prereq 3209 or above)

For description, see Frit 5219.

5289. FRENCH ROMANTICISM. (4 cr; prereq 3209 or above) Sivert

Reading of principal theoretical and literary works.

5275. HUYSMANS AND VILLIERS DE L'ISLE-ADAM: THE REACTION. (4 cr; prereq 3209 or above) Sivert

Late 19th-century literature: the reaction to realism and naturalism in the works of Huysmans, Villiers de l'Isle-Adam, and others.

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, Péret, Breton, Eluard, Aragon.

5289. TOPICS IN AFRICAN LITERATURE. (4 cr; prereq 3209 or above) Bensmaia, Renaud

African values and views of reality compared with "European" values and views through analysis of literary works. Comparison with other arts.

5303. MEDIEVAL FRENCH DRAMA. (4 cr; prereq 5207 or #) Akehurst

Medieval French theatre from its origins to the Renaissance.

5307. MEDIEVAL FRENCH ALLEGORY AND SATIRE. (4 cr; prereq 5207 or #) Akehurst

Satire and allegory in the French *Fabliaux*, the *Roman de Renart*, and the *Roman de la rose*.

5311. RENAISSANCE POETRY BEFORE THE PLÉIÀDE. (4 cr; prereq 3209 or above) Renaud, Conley

The *grands rhétoriciens*, Lemaire, Marot, Saint-Gelays, Louise Labé, and others; elegy, emblem, *blason*, and *art poétique*.

5312. PLÉIÀDE AND BAROQUE. (4 cr; prereq 3209 or above) Renaud, Conley

Ronsard, Du Bellay, and other poets of the Pléiade; the first baroque poets, including Sponde, Du Bartas, Desportes, Chassignet.

5331. FRENCH POETRY FROM D'AUBIGNÉ TO LA FONTAINE. (4 cr; prereq 3209 or above) Renaud, Conley

Movement from baroque to classicism, studied in the great verse works of the 17th century.

5335. THE NOVEL OF THE 17TH CENTURY. (4 cr; prereq 3209 or above) Renaud

5339. SHORT STORIES OF THE 16TH AND 17TH CENTURIES. (4 cr; prereq 3209 or above) Renaud, Conley

Narrative techniques and variants of short stories in France in 16th and 17th centuries.

5354. DRAMA OF THE 18TH CENTURY. (4 cr; prereq 3209 or above) Waldauer

Tragedy, drama, comedy (emphasis on comedy).

5355. NOVEL OF THE 18TH CENTURY. (4 cr; prereq 3209 or above) Waldauer

Emphasis on novels of Marivaux, Diderot, and Laclos.

5359. VOYAGERS AND PHILOSOPHES IN THE 18TH CENTURY. (4 cr; prereq 3209 or above)

Relationships between voyage literature and the construction of the concept of "man."

Major Requirements and Course Descriptions

- 5367. 19TH-CENTURY DRAMA: MUSSET.** (4 cr; prereq 3209 or above) Sivert
- 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
Includes prose texts. Novel, essay, short story, philosophical récit, autobiography.
- 5382. VALÉRY AND THE HERITAGE OF SYMBOLISM.** (4 cr; prereq 3209 or above) Preckshot
The poetry of Valéry; sources of his concept of poetry.
- 5383. 20TH-CENTURY FRENCH DRAMA TO EXISTENTIALISM.** (4 cr; prereq 3209 or above) Staff
Main trends, themes, and dramatic theories (surrealist, existentialist, contemporary theatre).
- 5385. ART AND LITERATURE.** (4 cr; prereq 3209 or above) Staff
The relationship among literary texts, aesthetics, semiologies, and the plastic arts.
- 5391. RECENT FRENCH POETRY.** (4 cr; prereq 3209 or above) Preckshot
Midcentury poets: Ponge, Michaux, Char, Bonnefoy, St. John-Perse, Breton, and others.
- 5397. LE NOUVEAU ROMAN.** (4 cr; prereq 3209 or above or #) Brewer
Last existentialist novels and innovations of Sarraute, Robbe-Grillet, Butor, Simon, and others.
- 5411. SCEVE.** (4 cr; prereq 3209 or above) Renaud
Poetry as knowledge and communication. The quest for self and reality through the complex concept of love.
- 5415. RABELAIS.** (4 cr; prereq 3209 or above) Conley
Gargantua and Pantagruel in original text.
- 5418. MONTAIGNE.** (4 cr; prereq 3209 or above) Conley
Essais studied in terms of mimesis and ideology.
- 5434. BAROQUE TRAGEDY: CORNEILLE.** (4 cr; prereq 3209 or above) Renaud
- 5438. PASCAL.** (4 cr; prereq 3209 or above) Staff
The literary originality of the *Provinciales*; major attention to *Les Pensées*.
- 5443. CLASSICAL COMEDY: MOLIÈRE.** (4 cr, \$3607, \$5607; prereq 3209 or above) Renaud
- 5444. CLASSICAL TRAGEDY: RACINE.** (4 cr; prereq 3209 or above) Renaud
- 5457. ROUSSEAU.** (4 cr; prereq 3209 or above) Waldauer
- 5458. VOLTAIRE.** (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
- 5462. RIMBAUD.** (4 cr; prereq 3209 or above) Robinson
- 5463. HUGO.** (4 cr; prereq 3209 or above) Sivert
- 5465. STENDHAL.** (4 cr; prereq 3209 or above) Staff
- 5466. BALZAC.** (4 cr; prereq 3209 or above) Sivert
- 5467. FLAUBERT.** (4 cr; prereq 3209 or above) Staff
- 5471. MALLARMÉ.** (4 cr; prereq 3209 or above) Robinson
- 5475. ZOLA AND THE NATURALISTIC NOVEL.** (4 cr; prereq 3209 or above) Sivert
- 5486. PROUST.** (4 cr; prereq 3209 or above) Paganini
- 5489. SARTRE.** (4 cr; prereq 3209 or above) Staff
Creative works and critical essays.
- 5588. ASPECTS OF CONTEMPORARY CRITICISM.** (4 cr; prereq 3209 or above) Staff
Criticism in contemporary France. Taught in French.
- 5607. CLASSICAL COMEDY: MOLIÈRE IN TRANSLATION.** (4 cr, \$3607, \$5443; prereq grad work in theatre arts or #) Renaud
Similar to 3607 or 5443; independent reading and research assignments in consultation with the instructor.
- 5701, 5702. STRUCTURE OF MODERN FRENCH: PHONOLOGY, MORPHOLOGY, SYNTAX.** (4 cr per qtr; prereq 3015 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.
- 5800. CIEE FILM PROGRAM IN PARIS.** (1-24 cr; prereq 1105, #)
Semester or year of study in film criticism, and/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 also may 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 [1-5 cr max])
- 5999. FOREIGN LANGUAGE TEACHING: THEORY AND PRACTICE.** (4 cr; prereq grad student 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.
- 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.
- 3031. WRITING TECHNIQUES AND GRAMMAR REVIEW.** (4 cr; prereq 3015 or #)
Techniques of translation. Discussion in Italian of problems of expression and composition; review of grammar.
- 3041. INTENSIVE ITALIAN FOR ROMANCE LANGUAGE MAJORS AND MINORS.** (4 cr; prereq 2 yrs of 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.
- 3104. ITALIAN STYLISTICS.** (4 cr; prereq 3015)
Principal literary genres examined through stylistic analyses and literary explications. Critical terminology; literary problems and techniques. Taught in Italian.
- 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.

- 3301. ITALIAN LYRIC POETRY.** (4 cr; prereq 3015)
Selected texts; notions of metrics and genre. 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 beginning to the *Risorgimento*. Taught in Italian.
- 3502. MODERN ITALIAN CIVILIZATION AND CULTURE.** (4 cr; prereq 1105)
Emphasis on the contemporary period. Taught in Italian.
- 3555. ITALIAN CULTURE IN THE MIDDLE AGES AND THE RENAISSANCE.** (4 cr; knowledge of Italian helpful but not necessary)
Italian culture as it influenced Western civilization. Cultural aspects of politics, religion, philosophy, science, music, the arts. Taught in English.
- 3590. TOPICS IN FRENCH AND ITALIAN CIVILIZATION AND CULTURE: RELATED ASPECTS.** (4 cr, §Fren 3590, §Frit 3590)
For description, see Frit 3590. Taught in English.
- 3970. DIRECTED STUDIES.** (1-5 cr per qtr; prereq undergrad, Δ)
Guided individual reading or study.
- 5042. INTENSIVE READING OF MODERN ITALIAN NARRATIVE LITERATURE.** (5 cr; prereq 3015 or 3041 or #) Pipa, Schneider
Twentieth-century authors analyzed from linguistic and literary points of view. Objectives are to achieve high level of reading competency and understanding of contemporary Italian literary scene. Taught in Italian.
- 5219. HUMANISM AND ITALIANISM IN THE LITERATURE OF THE 16TH CENTURY.** (4 cr, §Fren 5219, §Frit 5219; prereq 3209 or above)
For description, see Frit 5219.
- 5321. CHIVALRIC POETRY: BOIARDO, ARIOSTO, TASSO.** (4 cr; prereq 3015) Martinez
- 5328. RENAISSANCE PROSE WRITERS: MACHIAVELLI, CASTIGLIONE.** (4 cr; prereq 3015) Martinez
- 5337. MANZONI AND THE 19TH-CENTURY NOVEL.** (4 cr; prereq 3015) Pipa, Schneider
I promessi sposi and other novels.
- 5384. MODERN DRAMA.** (4 cr; prereq a3015) Pipa, Schneider
Dramatists such as Pirandello, Ugo Betti, Diego Fabbrì, and Eduardo de Filippo. Evolution of modern drama.

Major Requirements and Course Descriptions

5385. MODERN NARRATIVE. (4 cr; prereq 3015) Pipa, Schneider
Twentieth-century authors such as Svevo, Moravia, Pavese, and Vittorini. Evolution of the modern novel and novella.

5401-5402-5403. DANTE. (4 cr per qtr; prereq 3015) Martinez, staff
The Divina Commedia; Dante's minor works.

5411. PETRARCH. (4 cr; prereq 3015) Staff
Readings in English (for nonmajors) and Italian (for majors). Taught in English.

5418. BOCCACCIO. (4 cr; prereq 3015) Martinez, staff
Readings in English (for nonmajors) and Italian (for majors). Taught in English.

5461. LEOPARDI AND 19TH-CENTURY POETRY. (4 cr; prereq 3015) Pipa, Schneider
Leopardi's poetry; Carducci, Pascoli, and D'Annunzio.

5481. MONTALE. (4 cr; prereq 3015 or #) Pipa
Montale's poetic work.

5559. THEORIES OF LITERATURE AND CULTURE: VICO, CROCE, GRAMSCI. (4 cr; prereq #) Pipa
Readings in English (for nonmajors) and Italian (for majors).

5583. MARXISM AND EXISTENTIALISM IN ITALIAN NARRATIVE AND DRAMA. (4 cr; prereq 3015 or #) Pipa
Contemporary works based on the philosophies of Marxism and existentialism.

5601, 5602, 5603. ITALIAN LITERATURE IN ENGLISH TRANSLATION. (4 cr per qtr) Pipa, Schneider
Movements, genres, or themes in representative works from medieval times to present.

5609. DANTE (IN ENGLISH). (4 cr; prereq #) Martinez, staff

5701-5702. ITALIAN LANGUAGE. (4 cr per qtr; prereq #)

5900. TOPICS IN ITALIAN LITERATURE. (4 cr per qtr; prereq 3209 or above) Staff

French and Italian (Frit)

3590. TOPICS IN FRENCH AND ITALIAN CIVILIZATION AND CULTURE: RELATED ASPECTS. (4 cr, \$Fren 3590, \$Ital 3590)
Parallel trends and mutual influences in the French and Italian civilizations and cultures. Readings in English. Taught in English.

3604. CINEMAS OF THE REAL. (4 cr)
Film work of major vanguards: surrealism; Vigo, Renoir, Wells; Visconti, Rossellini, DeSica. Course varies in structure. Knowledge of French and Italian helpful but not necessary.

3608. NEW WAVE CINEMAS. (4 cr)

Film work of directors recasting classical traditions of Europe and America. Filmic theories of the Western, B-genre; political cinema: Godard, Resnais, Rivette, Pasolini, Antonioni, Bertolucci. Course varies in structure. Knowledge of French and Italian helpful but not necessary.

5219. HUMANISM AND ITALIANISM IN THE LITERATURE OF THE 16TH CENTURY. (4 cr, \$Fren 5219, \$Ital 5219; prereq 3209 or above) Renaud, Pipa

Aspects of Italian civilization from Dante to Machiavelli that led to the Renaissance. Focus on French and Italian literary texts. Knowledge of French and Italian not required. Taught in English.

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.

5531. BAROQUE LITERATURE IN FRANCE AND ITALY. (4 cr; prereq at least one 3xxx or 5xxx course in the literature of France or Italy) Renaud and staff

The spread of the baroque in literature through Europe. Movement from Italy, changing but rooted in a particular view of the world. Taught in English. (See also Span 5533, *The Baroque in European Literature: Spain.*)

5568. FRENCH SYMBOLISM AND ITALIAN HERMETICISM. (4 cr; prereq at least one pertinent course in French or Italian literature or #) Pipa, Robinson

Poetry of Rimbaud, Mallarmé, Valéry, Campana, Ungaretti, and Montale.

5569. NATURALISM IN THE FRENCH AND ITALIAN NARRATIVE. (4 cr; prereq at least one pertinent course in French or Italian literature or #) Pipa, Sivert

Flaubert, Maupassant, Zola, and other naturalist writers; Verga, Deledda, Fogazzaro, and others.

5587. FRENCH AND ITALIAN UTOPIAN LITERATURE. (4 cr, \$Ital 5587) Pipa
Millenarianism and utopianism in Italian and French literature from Dante to Fourier. Taught in English.

Albanian (Alb)

5510. ALBANIAN LANGUAGE AND CULTURE. (4 cr) Pipa
Aspects of Albanian culture: language, folklore, ethnology, literature. Knowledge of Albanian not required.

Genetics and Cell Biology (GCB)

College of Biological Sciences

Staff—Head, William S. Herman, 248a Biological Sciences Center; *Director of Undergraduate Studies*, Val W. Woodward

Professors: Anderson, Cunningham, Enfield, Fan, R. Herman, W. Herman, Hooper, Johnson, Kerr, McKinnell, Rosenberg, Rubenstein, Sheppard, Simmons, Sinha, Snustad, Snyder, V. Woodward.

Associate Professors: Blumenfeld, Hockstein, Hackett

Assistant Professors: Brooker, Curtsinger, Iwanij, Lefebvre, Mahoney, Shaw, Silflow

Genetics is the study of inheritance, including molecular mechanisms of gene organization and expression, human genetics, and the behavior of genes in the 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 are frequently taken by students who are seeking a B.A. degree in biology through the College of Liberal Arts.

3002f. 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) Anderson

Human genetics; study of individuals, families, populations, and races with respect to differences in intelligence, behavior, disease, and other matters of social concern.

3008f.s. THE BIOLOGY OF CANCER. (3 cr; prereq Biol 1009) McKinnell, Sheppard

Biological aspects of etiology, phylogeny, and cellular processes involved in neoplasia. Growth and differentiation of normal and cancer cells. The history of cancer research.

3022f.w,s,su. 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.

3960f.w. RESEARCH TOPICS. (1 cr; S-N only; prereq Biol 5001) V Woodward
Discussions of faculty research.

5001f. SCANNING ELECTRON MICROSCOPY LAB. (4 cr; prereq #; S-N only) Kuehn
Practical laboratory experience in the operation of the scanning electron microscope and preparation of biological samples for SEM analysis; emphasis on use of SEM for research work; charges for supplies and microscope time.

5002s. TRANSMISSION ELECTRON MICROSCOPY LAB. (4 cr; prereq #; S-N only) Kuehn
Practical laboratory experience in operation of transmission electron microscope and preparation of biological samples for TEM analysis; emphasis on thin sectioning of tissues selected by student; charges for supplies and microscope time.

5011w. GENERAL AND COMPARATIVE EMBRYOLOGY. (4 cr; prereq Biol 1106 or 3011) McKinnell
Embryological development of vertebrates.

5013s. MAMMALIAN REPRODUCTION. (4 cr; prereq Biol 3011, Biol 5001 or #; offered odd yrs) Sinha
Introduction to the biological aspects of mammalian reproduction with emphasis on eutherians. Selected topics and examples are used to discuss basic problems, current concepts and patterns of reproduction at molecular, cellular, and organismal levels.

5015s. HISTOLOGY: CELL AND TISSUE ORGANIZATION. (5 cr; prereq Biol 1106 or 3011 plus 4 addtl cr in biological sciences) Cunningham
Cellular orientation used to explore organization of differentiated cells and tissues (epithelia, connective, muscle, and nerve) as they facilitate specialized functions. Laboratory combines experience with techniques (phase and fluorescent microscopy, autoradiography, and paraffin sectioning), EM demonstrations, and studies of prepared microscope slides.

5022f,w,s,su. 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.

5024w. THE GENETICS OF DEVELOPMENT. (4 cr; prereq Biol 5003 or #) R Herman
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 procaryotes and single-celled eucaryotes, a nematode, and *Drosophila*.

5030s. LABORATORY: GENETICS. (2 cr; prereq 3022 or 5022 or Biol 5003 or #)
Investigative approaches to analysis of genetic problems. Focus on a given organism or related group of organisms may differ from quarter to quarter.

Major Requirements and Course Descriptions

5031w. ADVANCED GENETICS I. (4 cr; prereq 3022 or Biol 5003 [with grade of A or B], Biol 5001 or BioC 5751 or #) Lefebvre
Mechanics of inheritance. Comparative organization of genetic material in procaryotic and eucaryotic organisms. Mutation, complementation, and recombination as operational criteria for genetic analysis.

5032s. ADVANCED GENETICS II. (4 cr; prereq 5031) Hackett
Action of the gene in molecular, cellular, and organismal development. Mechanisms of information transfer and regulation of these processes in various biological systems are analyzed with emphasis on examining original research.

5033s. POPULATION AND QUANTITATIVE GENETICS. (4 cr; prereq 3022 or Biol 5003, course in biometry or statistics or #) Curtsinger
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.

5042f. QUANTITATIVE GENETICS. (4 cr; S-N only; prereq 5033...Stat 5301 recommended) Enfield
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.

5043f. HUMAN GENETICS. (3 cr; prereq 3022 or Biol 5003 or #) Anderson
Principles of human genetics at the molecular, cellular, individual, and population levels. Chromosomal and biochemical disorders; gene mapping; mutation and natural selection; variation in intelligence and behavior; genetic screening, counseling, and therapy.

5044w. HUMAN POPULATION GENETICS. (4 cr; prereq 5043, biostatistics [PubH 5452 or equiv] or #) Anderson
Biometric methods for research in human genetics. Use of genetic concepts and appropriate statistical techniques in exploring new problems. Use of statistical packages and genetic programs to analyze population data and model genetic systems. Individual study of current problems, and group discussion.

5048f. ADVANCED CELL BIOLOGY I. (4 cr; prereq Biol 5004 [with grade of A or B] or #) Iwanij, Johnson
Eucaryotic systems with emphasis on structure, function, and chemistry of cell organelles; selected specialized cells also considered. Focus on membranes and secretion including membrane methodologies, structure, function, synthesis, turnover; cell surfaces, protein synthesis, glycosylation, membrane fusion, lysosomes and endocytosis.

5049w. ADVANCED CELL BIOLOGY II. (4 cr; prereq 5048, Biol 5003) Johnson, Silflow
Eucaryotic systems with emphasis on the structure, function, and chemistry of cell organelles; selected specialized cells also considered. Focus on motility, the cell nucleus, and metabolically active membranes including roles of microtubules and microfilaments in cell locomotion, shape changes, cytokinesis, ciliary beating, and organelle redistribution; cell cycle, chromosomal structure, replication and mitosis; compartmentalization and autonomy of mitochondria and chloroplasts, role of peroxisomes, and detoxification by the endoplasmic reticulum.

5052s. QUANTITATIVE TECHNIQUES, CELL BIOLOGY. (4 cr; prereq calculus, introductory cellular or molecular biology, biochemistry recommended) Mahoney, Rubenstein
Use and detection of radioisotopes; theory and practice of analytical and preparative ultracentrifugation, chromatography, spectroscopy, and electron microscopy; tissue culture and subcellular particle fractionation.

5061 (formerly Biol 5061). DEVELOPMENTAL BIOLOGY. (3 cr; prereq Biol 5003, 5004) Kerr
Developing systems and control mechanisms of development, from the molecule to the organism.

5063s. THEORETICAL POPULATION GENETICS. (3 cr; prereq college-level calculus, basic statistics and genetics; offered odd yrs) Simmons
Population genetic theory as related to problems of natural history.

5073s. ADVANCED HUMAN GENETICS. (4 cr; prereq 5031 or #) King, Sheppard
Application of molecular, biochemical, chromosomal, and population genetics to human variation and disease. Abnormal chromosome number and structure; abnormal enzyme, structural protein, receptor and transport; analysis of inheritance patterns; behavioral genetics; and genetic basis of common disease.

5114f. GENERAL PHYSIOLOGY. (3 cr; prereq Biol 3011, 5001, Phys 1109 or 1295) Goldstein
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.

5134w. ENDOCRINOLOGY. (4 cr; prereq Biol 3011, 5001 or #) W Herman
Survey of structure and function of invertebrate and vertebrate endocrine systems.

5605f. CELL BIOLOGY LABORATORY. (2 cr; prereq Biol 5004 or #) Blumenfeld, Lefebvre
Experimental approaches to cell structure, function, and replication, including microscopy, autoradiography, cell fractionation, and molecular and chemical analyses.

5970f, w, s, su. INDEPENDENT STUDY. (Cr ar; pre-req #, Δ)

Individual study on selected topics or problems with emphasis on selected readings and use of scientific literature.

5990f, w, s, su. LABORATORY RESEARCH.

(Cr ar; prereq #, Δ)

Individual projects on selected topics and problems.

Geography (Geog)

Staff—*Chair*, Richard H. Skaggs, 414 Social Sciences Building; *Director of Undergraduate Studies and Honors*, Roderick H. Squires, 548 Social Sciences Building

Professor Emeritus: Mather

Regents' Professor: Borchert

Professors: J. Adams, Barrett, Brown, Gersmehl, Hart, Hsu, Lukermann, Porter, Rice, Schwartzberg, Skaggs, Sheppard
Associate Professors: R. Adams, Miller, Scott, Squires, Weil

Assistant Professors: Andrews, Leither

Geography emphasizes the importance of the relative location of place and event in the study of the character of regions, relations between human activities and environment, and processes through which social and physical changes occur. Its approach and methods are both scientific and humanistic.

General Education—The department recognizes and endorses the purpose of a liberal education that exposes students to the breadth and depth of intellectual curiosity. Geography courses serve to inform students about the world in which they live. Many of them may be used to satisfy CLA group distribution requirements.

Courses that introduce students to Middle and South America, Africa, Asia, and Oceania may be used to satisfy the CLA world studies requirement.

Other courses offer the opportunity to study certain characteristics of the world (e.g., the urban scene, systems of production, and the physical landscape).

The department offers a major for B.A. and B.S. degrees, a minor, honors courses, and independent study opportunities.

B.A. Major Sequence

Required Preparatory Courses—Two courses selected from 1301, 1401, 1501, and 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

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-level 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 majors must file a program plan made in consultation with a faculty adviser, within one quarter of declaring the major.

B.S. Major Sequence

Required Preparatory Courses—Two courses selected from 1301, 1401, 1501, and 3001

Major Requirements—Minimum of 56 credits with a grade of C or better in courses above 3001, to include at least 36 cr in geography, 3511 or 3531, one additional course in geographical techniques, and at least one course in the history and philosophy of geography.

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-level geography course, or 3970 or 3990. It must be supervised by

Major Requirements and Course Descriptions

a geography department faculty member and submitted at least one quarter before graduation.

One upper-level writing course in English.

Mathematics: one of the following sequences:

Math 1211, 1221, 1231;
Math 1311, 1321, 1331;
Math 1511H, 1521H, 1531H;
Math 1611, 1621
CSci 3105, 3106;
CSci 5101, 5102
Stat 5021, 5022, 5201

All majors must file a program plan made in consultation with a faculty adviser, within one quarter of declaring the major.

Minor Sequence—Minimum of 20 cr, including at least 15 credits 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, 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.

1973. GEOGRAPHY OF THE TWIN CITIES. (4 cr, §3973) 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) 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, Rice
Physical resources, population, and commercial production.

3121. LATIN AMERICA. (4 cr) Barrett, Mather, 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.

3133. THE BORDERLANDS. (4 cr) Barrett
Description and analysis of United States borders, emphasizing the southern; geography of cross-border flows of people, money, goods, ideas, physical substances.

3141. AFRICA. (4 cr) Porter, 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
Cultural-economic realms in Europe (excluding U.S.S.R.); areal organization of each realm.

3165. SPAIN AND PORTUGAL. (4 cr) Barrett
Environment, human activities, and culture regions in the Iberian Peninsula and the Atlantic Islands.

3181f. SOVIET UNION. (4 cr) R Adams, Rice
Survey of physical resources, population, and economic geography; prospects and comparisons with the United States.

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
Socio-economic 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.

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 from year to year.

5112. WESTERN UNITED STATES. (4 cr) Mather

Physical and human resources of western United States.

5113. CANADA AND ALASKA. (4 cr) Mather

Physical and human geography. International and external areal relationships.

5131. COLONIAL MEXICO AND THE CARIBBEAN. (4 cr) Barrett

Exploration, discovery, settlement, livelihood, and circulation to about 1800.

5132. SOUTH AMERICA. (4 cr) Mather

Physical resources, population, agriculture, manufacturing, and transportation in countries of South America.

5142. GEOGRAPHY OF EAST AFRICA. (4 cr)

Porter
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.

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; prereq #) 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. (4 cr) R Adams, Leitner

Physical and human geography of the socialist realm of Eastern Europe with comparative analyses of individual countries; emphasis upon the historical, economic, and political diversity with topical case studies.

5173. NORDEN. (4 cr; §Scan 5173) Rice

Physical and human geography of Sweden, Finland, Denmark, Norway, and Iceland with emphasis on population change and settlement patterns.

5176. CELTIC BRITAIN AND IRELAND. (4 cr) Rice

An historical treatment of the cultural, political, and economic geography of Ireland, Scotland, and Wales. Considerable attention will be paid to ties with England and their impact on patterns of human activity.

5178. SCANDINAVIA IN THE MIDDLE AGES. (4 cr, §Scan 5718) 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.

5181. U.S.S.R. REGIONS AND PLANNING. (4 cr) R Adams

Regionalization, production specialization, and interchange within U.S.S.R.; effects of policies of centralization and regional autonomy; present trends and prognosis.

5191. AGRICULTURAL MARKETING IN AFRICA. (4 cr) Scott

Cultural, ecological, and spatial analysis of structural change in rural Africa; the impact of commercialism on traditional socioeconomic institutions; the spatial behavior pattern of small landholders.

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.

5322. POLITICAL GEOGRAPHY OF ASIA. (4 cr; prereq 3321 or a regional course on any part of Asia or #) Schwartzberg

Geographical analysis of political development within particular countries of Asia and of problems of regional and interregional conflict and cooperation.

Topical Studies

3321. POLITICAL GEOGRAPHY. (4 cr) Schwartzberg

Scope and methods; selected concepts, problems, and areas.

3331. ECONOMIC GEOGRAPHY. (4 cr) R Adams, 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.

Major Requirements and Course Descriptions

3341. INDUSTRIALIZATION AND WORLD TRADE. (4 cr) R Adams

Process and models of industrial growth; multinational corporations, national profiles of industry and foreign trade, organizations, blocks, and prospects.

3344. GEOGRAPHY, PROPERTY RIGHTS, AND LAND USE. (4 cr) Squires

Analysis of how individuals choose to use land in the United States, emphasizing the statutory and regulatory framework for decisions. Description of American landscapes as outcomes of decisions.

3345. ENERGY AND MINERALS. (4 cr) R Adams

Sources, production, circulation, and consumption of power, metals, and nonmetallic minerals. Problems of exhaustion, substitution, pollution, costs, trade, and policy. National and local case studies.

3351. FOOD PRODUCTION AND DISTRIBUTION. (4 cr) Weil

Environmental constraints on agriculture, agricultural decision making, farming systems, contemporary issues in the U.S., and international food production and distribution.

3355. ENVIRONMENTAL PROBLEMS. (4 cr)

Gersmehl, Squires

Environmental problems associated with human activities.

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.

3375. URBAN MINORITIES IN THE UNITED STATES. (4 cr) Scott

Comparative analysis of minorities in American cities, including migration patterns, residential patterns, social-economic characteristics, public and private community enterprises, and class in urban structure.

3378. MODERNIZATION AND THE THIRD WORLD. (4 cr) Scott, Weil

Concepts of modernization in the third world; historical trends and impact of changes on spatial organization; human environment relations.

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 #) Barrett, 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.

3441. LANDFORM GEOGRAPHY. (4 cr) Brown

The role of landforms in the distribution of resources; processes of landform origin and change; map interpretation of landforms; complex environmental history of the Quaternary period and its contribution to a complicated pattern of landforms, with emphasis on North America.

3451. GEOGRAPHY OF SOILS. (4 cr, §Soil 5512) Gersmehl

Distributions of soil-forming processes and soil types; soil differences in small areas; soil constraints on human activities in different places; regional differences in soil problems and management techniques—farming, forestry, construction, agribusiness, suburbanization, homesteading.

3973. GEOGRAPHY OF THE TWIN CITIES. (4 cr, §1973) Borchert, Lukermann

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.

5344. HISTORICAL GEOGRAPHY OF RESOURCE USE IN THE UNITED STATES. (4 cr; prereq 3101 or 3344 or grad) Squires

Analysis of the development of the American landscape, especially Minnesota, through studying how resources are used.

5372. METRO ANALYSIS I: POPULATION AND HOUSING (4 cr) JAdams

Urban systems and metropolitan areas, structure and growth; daily urban systems; simulated urban systems; metropolitan population dynamics; social area analysis, transportation systems; travel behavior; land use; retain structure, change.

5373. METRO ANALYSIS II: URBAN ECONOMIC GEOGRAPHY. (4 cr) J Adams

Neighborhood transition; conflicts in housing, location of facilities, and urban renewal.

5375. AMERICAN METROPOLITAN EVOLUTION. (4 cr) Borchert

Spread of urbanization across the U.S.; differentiation of city sizes and functions within the nation's resource regions and circulation system; development of today's system of cities.

5376. AMERICAN METROPOLITAN REGIONS. (4 cr) Borchert

Development of major metropolitan areas of the United States and their tributary regions; changing metropolitan patterns of population, wealth, and land use.

5381. LOCATION THEORY AND SERVICES.

(4 cr) R Adams, Sheppard

Localization of economic activity; classical and current models and theory; methods of solving optimal location problems; case studies of industries and services at national, regional, and local levels; outside speakers.

5383. TRANSPORTATION GEOGRAPHY. (4 cr; prereq 3331 or #) R Adams

Principles and theory of spatial development of transport systems; interaction of resource use and network growth; commodity and passenger flows; case studies at national, regional, and local (urban) levels.

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 utilization of health practitioners and facilities.

5423. ADVANCED CLIMATOLOGY. (4 cr; prereq 3421 or #) Skaggs

Selected topics including energy balances, synoptic climatology, climate models.

5424. APPLIED CLIMATOLOGY. (3 cr, \$Soils 5424; prereq Geog 3421 or Soils 5420 or #) Baker, Skaggs

Application of climatic principles and data to selected problems in environmental management and agriculture.

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) Borchert

The context of planning within the changing geographic patterns of land utilization. The nature of land use plans; purpose and process of land use planning.

History and Philosophy of Geography

3801. DEVELOPMENT OF GEOGRAPHIC THOUGHT. (4 cr, \$5801; prereq three courses in geography) Lukermann

Concepts and methods of geography; differing schools of thought as expressed in contemporary geographic literature.

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 sr, three courses in geography) Lukermann

For description, see 3801.

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.

Geographical Techniques

1501. THE LANGUAGE OF MAPS. (5 cr, \$3311) Andrews, Gersmehl, Hsu, Porter

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.

3511. INTRODUCTION TO CARTOGRAPHY.

(5 cr; prereq 5 cr in geography or #) Andrews, Brown, Hsu, 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, incl combined cr at 3xxx and 5xxx levels]; prereq #) Staff

Internship with institution, government agency, or private company arranged through and supervised by the department.

3531. QUANTITATIVE METHODS. (4 cr; prereq geography major or #) R Adams, Sheppard, Skaggs

Applications of quantitative techniques to problems of classification, measurement, area association and sampling, and comparative regional analysis. Statistical sources commonly used by geographers.

3551. INTRODUCTION TO REMOTE SENSING. (5 cr; prereq 8 cr in geography or #) Brown, Miller, Porter, Skaggs

Theory and applications of imaging remote sensors to environmental problems. Remote sensor images in geographic studies.

Major Requirements and Course Descriptions

5511. CARTOGRAPHIC ANALYSIS. (4 cr; prereq 3511, 3531 or #) Andrews, Brown, Hsu, 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 #) Andrews, Brown, Hsu, Porter
Selected topics: the system of cartographic communication, map design, map reading, map analysis, history of cartography.

5522. COMPUTER CARTOGRAPHY. (4 cr; prereq basic knowledge of FORTRAN, 3511 or #) Andrews, Hsu
Geocoding and locational data structure, library mapping programs, programming for mapping and geographical analysis, mapping via an interactive cartographic system.

5530. CARTOGRAPHY INTERNSHIP. (2-5 cr per qtr [10 cr max, incl combined cr at 3xxx- and 5xxx-levels]; prereq #) Staff
For description, see 3530.

5531. QUANTITATIVE RESEARCH DESIGN. (4 cr; prereq 3531 or #) R Adams, Sheppard
Intermediate statistical methods for handling geographical data; multivariate methods, regionalization, spatial autocorrelation, spatial pattern analysis.

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.

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.

5900. TOPICS IN GEOGRAPHY. (4 cr per qtr; prereq sr or grad student, Δ)
Special topics and regions. Course offered by visiting professors in their research fields.

Geology and Geophysics (Geo)

*School of Earth Sciences
Institute of Technology*

Staff—Head, Peter Hudleston, 106 Pillsbury Hall; *Director of Graduate Studies,* Harold M. Mooney; *Director of Under-*

graduate Studies, E. Calvin Alexander
Regents' Professor: Wright

Professors: Banerjee, Hooke, Hudleston, Mooney, Murthy, Pfannkuch, Sawkins, Shapiro, Sloan, Stout, Walton, Weiblen, Zoltai

Associate Professors: Alexander, Seyfried, Shaw, Yuen

Assistant Professors: Ito, Kleinspehn, Paola, Schult, Teyssier

Adjunct Faculty—Chandler (Minn. Geological Survey), Goldich (U.S. Geological Survey, Denver, Colorado), Morey (Minn. Geological Survey), Southwick (Minn. Geological Survey), 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 the historical development of the earth through these shaping processes.

Students intending to satisfy CLA group B laboratory requirements by taking 1001 must also complete the lab course, 1021.

B.A. Major Sequence

Required Preparatory Courses—Chem 1004-1005, Math 1211-1221-1231 (sequences to be started fr yr); Phys 1271-1281-1291 taken in conjunction with Phys 1275-1285-1295; Comp 3015 or 3031 (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, 5111.

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 course work if you are considering a scientific career.

1001f, w.s. 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, Shaw

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.

1007s. ENVIRONMENTAL GEOLOGY. (4 cr; prereq 1001)

Geological application in resource management, land use planning, etc. Geological evolution of the biosphere and the impact of human activities on its resources. Geological hazards. The Twin Cities area as a geological environment. Lectures, laboratories, field trips.

1012f. ROCKS AND PLANETS. (4 cr; 3 lect hrs) Alexander

A nonmathematical introduction to planetology. The origin of the elements, solar system, earth, and life. Spaceship Earth and the possibilities for extraterrestrial life.

1013f. ORIGIN AND EVOLUTION OF LIFE. (4 cr; 3 lect, 1 lab hrs per wk) Sloan

Geological evidence of the origin and increasing complexity of living systems, including biogenesis, single-celled organisms, plants, animals, and ecosystems. Problems of extraterrestrial life.

1021f, w.s. PHYSICAL 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.

1111s. INTRODUCTORY PHYSICAL GEOLOGY. (5 cr; for prospective majors and others desiring more intensive course; prereq high school or college chemistry or #; 3 lect hrs, 1 rec hr, and two 2-hr labs per wk) Staff

For prospective majors and others desiring a more intensive lecture and laboratory sequence than 1001.

1211. HONORS EARTH SCIENCE. (5 cr, \$1001, \$1111; prereq selection for IT Honors curriculum or consent of IT Honors office; 4 lect hrs, 1 rec hr, one 3-hr lab per week) Staff

Application of physics and chemistry to the structure and dynamics of the earth.

1601w. OCEANOGRAPHY. (4 cr; 3 lect, 1 lab hrs per wk) Shapiro, Barnwell, Paola

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; for prospective majors and others desiring more intensive course than 1002; prereq 1111 or #; 3 lect hrs, 1 rec hr, two 2-hr labs per wk)

For description, see 1002.

3401w. INTRODUCTORY MINERALOGY. (5 cr, \$5004, \$5404; prereq 1001 or 1111 or #, 1 term college chemistry, Math 1221; 3 lect, 6 lab hrs per wk) Zoltai

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.

5002s. STRUCTURAL GEOLOGY. (4 cr, \$5201; prereq 3401 or 5004 or #; not open to geology, geophysics, geo-engineering, mineral engineering majors; 3 lect, 2 lab hrs per wk) Teyssier

Primary and secondary structures of rocks, mechanics and modes of deformation, structural techniques. Laboratory exercises in three-dimensional representation and solution of selected structural problems.

5004w. MINERALOGY. (4 cr, \$3401 \$5404; prereq 1 term college chemistry, Math 1221, #; not open to geology, geophysics, and geological, mineral and metallurgical engineering majors; 3 lect, 6 lab hrs per wk) Zoltai

For description, see 3401.

5100. ADVANCED GENERAL GEOLOGY. (1-2 cr per qtr; S-N only; prereq 1001 or 1111, #) Staff

Seminar course on geology of an area, followed by field trip to the location. Regions studied will vary from year to year.

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 biogeochemical cycles. Geologic limits to resources and carrying capacity of the earth. Land use planning, environmental impact assessment, ecogeologic world models. Field project.

Major Requirements and Course Descriptions

5111su. FIELD GEOLOGY. (5-9 cr; restricted to geology, geophysics, and geo-engineering majors; prereq 5201 and #) 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 3112 or #) Sloan
Morphology, classification, and ecology of selected groups of invertebrate fossils.

5152. INVERTEBRATE PALEONTOLOGY. (5 cr; prereq 5151; 3 lect, 4 lab hrs per wk; offered when demand warrants) Sloan
In-depth study of the morphology, classification, and ecology of selected groups of invertebrate fossils.

5154w. VERTEBRATE PALEONTOLOGY I. (5 cr; prereq 5151 or EBB 5114) Sloan
Morphology, evolution, and stratigraphic distribution of fossil fish, amphibians, reptiles, and birds.

5155s. VERTEBRATE PALEONTOLOGY II. (5 cr; prereq 5154 or EBB 5114) Sloan
Morphology, evolution, and stratigraphic distribution of fossil mammals.

5156s. ZOOARCHAEOLOGY. (5 cr; primarily for paleontology, anthropology or classics students; prereq 5155 or #; 3 lect, 2 lab hrs per wk; offered 1987 and alt yrs) Sloan
Identification and interpretation of animal remains in an archaeological context.

5201s. STRUCTURAL GEOLOGY. (5 cr; prereq 3102, 3401; 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 alt yrs) Hudleston
Origin and nature of major types of disturbance affecting continental crust including analysis of form and development of individual structural components.

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.

5253w. SEDIMENT TRANSPORT MECHANICS. (3 cr; prereq 5251 or 5652 or CE 5410) Hooke
Properties of sediment, waterbed interaction, types of transport (bed load, suspended load), suspension of sediment, sediment transport theories, consequences of sediment movement in alluvial channels.

5255w. GLACIOLOGY. (4 cr [5 cr with term project]; prereq Math 3221 or equiv or #) 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) Wright
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 and kinetic) of chemical species in 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.

5351f. ECONOMIC GEOLOGY: METAL SULFIDE DEPOSITS. (4 cr [5 cr with lab]; prereq 3401 or 5404, 5201 or #) Sawkins
Nature and distribution of sulfide deposits and analysis of the processes by which metals are concentrated in magmatic, hydrothermal, and sedimentary environments.

5352s. ECONOMIC GEOLOGY: FERROUS METALS AND URANIUM DEPOSITS. (4 cr; prereq 3401, 5201 or #) Sawkins
Environmental setting, mineralogy, and genesis of ferrous metal ore deposits, uranium deposits, and non-metallic deposits.

5404f. MINERAL SYSTEMS I. (4 cr, \$3401, \$5004; prereq 1 qtr chemistry) Zoltai
Crystallography: basic and compound symmetry operations, point and space groups, crystal forms and coordinate systems. Systematics of basic and derivative close-packed and coordination polyhedral structures of rock-forming and ore minerals. Demonstrations of crystallographic and crystal structural concepts.

5405. OPTICAL MINERALOGY. (2 cr; prereq 3401 or 5404, may be taken concurrently)
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 1291; open only to jr or sr 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. PHYSICS AND CHEMISTRY OF THE EARTH I. (4 cr; prereq 1111, Phys 1295) Mooney
Earthquake seismology; physical structure of the earth's crust and deep interior; gravity field of the earth.

5506w. PHYSICS AND CHEMISTRY OF THE EARTH II. (4 cr; prereq 1111, Phys 1291 or #)

Alexander, Shaw
Gravity and magnetic fields of the earth; paleomagnetism, thermal history of the earth.

5507s. PHYSICS AND CHEMISTRY OF THE EARTH III. (4 cr) Banerjee
Origins and chemical evolution of the earth through geologic time.

5511f. PRINCIPLES OF GRAVITY AND MAGNETIC EXPLORATION. (3 cr; prereq Phys 1291)
Instrumentation, surveying techniques, reduction of data, interpretation, case histories.

5512w. PRINCIPLES OF SEISMIC EXPLORATION. (3 cr; prereq Phys 1291)
Reflection and refraction seismology; theory, interpretation, instruments.

5513s. PRINCIPLES OF ELECTRICAL EXPLORATION. (3 cr; prereq Phys 1291)
Resistivity, electromagnetic induced polarization, and other methods.

5521s. DATA PROCESSING METHODS IN GEOPHYSICS. (3 cr; prereq 5512, 1 yr calculus)
Digital data processing techniques used in geophysical exploration.

5531. HIGH PRESSURE MINERALOGY WITH GEOPHYSICAL APPLICATIONS. (3 cr; prereq 3401 or #) Shaw
Phase transformations in solids at high pressures and temperatures; silicates and silicate analogs, likely mineralogic constitution of the mantle, and detailed structure of the mantle.

5535w. 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.

5541f. GEOMAGNETISM. (3 cr; prereq 1 qtr each geology, physics, mathematics; offered 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, \$EBB 5601; prereq Chem 1005 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.

5602. CASE STUDIES IN LIMNOLOGY. (3 cr; prereq 5601 or EBB 5601, #) Shapiro
Detailed analyses of specific studies on lakes and problems of lakes throughout the world.

5603. GEOLOGICAL LIMNOLOGY. (4 cr; prereq 5601 or EBB 5601) Shapiro
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 1231, 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.

5615. PETROLEUM RESERVOIR GEOLOGY. (2 cr; prereq 1001 or #) Alexander, Ito, Pfannkuch
Subsurface geology and its application to the evaluation of petroleum and natural gas reservoirs.

5621. LIMNOLOGY LABORATORY. (2 cr, \$EBB 5621; prereq 5601 or EBB 5601 or #) Shapiro
Laboratory to accompany 5601 (EBB 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 junior or senior 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; and petrochemical microscopy.

5652w. SEDIMENTARY PETROLOGY AND PROCESSES. (5 cr; prereq 3102, 5651 or #; offered 1988 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.

5653. STRATIGRAPHY AND BASIN ANALYSIS. (4 cr; prereq 5651 or #) 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.

Major Requirements and Course Descriptions

5980. SEMINAR: CURRENT TOPICS IN GEOLOGY AND GEOPHYSICS. (1-6 cr; prereq #) Staff

5990f,w,s. SENIOR THESIS. (2 cr per qtr [max 6 cr]; prereq geology or geophysics major with 4th yr standing and #) 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, Frank D. Hirschbach, 219 Folwell Hall; *Director of Undergraduate Studies,* Leonard L. Duroche, 215 Folwell Hall; *Director of Language Instruction,* Ray M. Wakefield, 214 Folwell Hall

Professors: Firchow, Hirschbach, Joeres, Liberman, Schulte-Sasse, Taraba, Weber, Weiss

Associate Professor: Duroche

Assistant Professors: Fullerton, Suhr, 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.

General Education—German literature courses in translation (3601, 3602, 3603, 3604, 3610, and 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—Two options exist for students who are contemplating enrolling in 1xxx-level German courses. The 1101-1106 courses are the standard classroom sequence, although students must pass the appropriate proficiency test in order to take 1101-1103 for degree credit (see page 277 for information on the phasing in of the entrance standard). German 1110 for 10 credits offers an individualized approach for the equivalent of second- and third-quarter classroom German. Consult the department for further information on placement and testing.

B. A. Major Sequence—German

Required Preparatory Courses—1105 or 1105H or 1205 or placement

Major Requirements—3104 or 3104H, 3105 or 3105H, 3342 or 3342H; Comp 3011 or 3012 or 3013 or 3014; one of the following sequences:

*Literature Emphasis—*4 cr 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, storm and stress, and classicism: 3041, 3301, 3311, 3421, 3422, 3423, 3424
3. 19th-century literature: 3042, 3302, 3312, 3431, 3432
4. 20th-century literature: 3043, 3303, 3313, 3441, 3442, 3443, 3604, 5371, 5471, 5472
5. Civilization and culture: 3501, 3511, 3512, 3513, 3590, 5331, 5371, 5510
6. Conversation and composition: 3011, 3012, 3013, 3014, 3015, 3016, 3021, 5011
7. Philology: 3701, 3702, 5701, 5703, 5704, 5705

Plus two 3xxx or 5xxx elective German courses.

*German Studies Emphasis—*At least six courses from 3011, 3012, 3013, 3014, 3015, 3016, 3021, 5011

At least two courses from 3501, 3511, 3512, 3513, 3590, 5331, 5510

One 3xxx or 5xxx elective German course

Two courses in art history, economics, geography, history, humanities, music, or political science that concentrate on German-speaking or central European areas

One of the following: Ling 1001, 1005, 3001, 3005, 3811

*Language Emphasis—*16 cr from 3011, 3012, 3013, 3014, 3015, 3016, 5011

20 cr in development of the German language: 3702, 5701, 5703, 5704, 5705

A minimum of 8 cr from the following courses: 3401, 3411, 3511-3512-3513, 5101, 5102

Major project in the German language (historical or modern)

In addition, the department recommends study abroad in a German-speaking country for at least six months in order to acquire fluency in the language. It also recommends the following courses:

Ling 3001/5001, Ling 3601/5601.

Courses taught in translation, except 3604, do not count toward 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—1105 or 1205 or placement

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 on A-F grading. No more than one course may be in directed or independent study. Courses taught in translation, except 3604, do not count toward the minor.

The minor program must be approved by the director of undergraduate studies.

Minor Sequence—Dutch

Required Preparatory Course—1105

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, §1110 for 1102-1103; degree credit granted only if entrance standard met)

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.

1110. INDIVIDUALIZED BEGINNING GERMAN. (1-10 cr per qtr [10 cr max], §1102-1103; prereq 1101 or 1102 or 5 cr of 1110 prior to fall 1985 or #; degree credit granted only if entrance standard met) 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. Each student earns credits at own pace.

3011-3012-3013f, w.s. CONVERSATION AND COMPOSITION. (4 cr per qtr; prereq 1105 or placement)

Spoken German; composition; development of vocabulary; grammar review.

3014f. CONVERSATION AND COMPOSITION. (4 cr; prereq 3013 or #)

Focus on the media. Reading and analysis of German newspapers and journals; exercises using German-language radio and video broadcasts.

3015w. CONVERSATION AND COMPOSITION. (4 cr; prereq 3013 or #)

Technical, scientific, and scholarly use of German in both written and oral form.

3016s. TECHNIQUES OF TRANSLATION. (4 cr; prereq 3013 or #)

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 an annual dramatic production.

3043. ORAL INTERPRETATION OF GERMAN DRAMA. (2 cr per qtr; prereq 3013 or equiv, #)

Dramatic reading of German plays for pronunciation and preparation for German play production.

3104f, w. READING AND ANALYSIS OF PROSE. (4 cr; prereq 1105 or #)

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 1105, honors student or #)

For description, see 3104.

3105w, s. READING AND ANALYSIS OF DRAMA AND POETRY. (4 cr; prereq 1105 or #)

For description, see 3104.

3105H. HONORS COURSE: READING AND ANALYSIS OF DRAMA AND POETRY. (4 cr; prereq 1105, honors student or #)

For description, see 3104.

Major Requirements and Course Descriptions

3106. INTRODUCTION TO GERMAN LITERARY CRITICISM AND THEORY. (4 cr; prereq 3104 or 3105 or #)

Major movements in German criticism from positivism to present. Theory and practice. Taught in English, readings in German.

3302. LYRIC POETRY: NOVALIS THROUGH LILJENCRON. (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, Hofmannsthal) 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 #; non-honors students may enroll with #)
Significant themes in German literature.

3342. MAJOR PROJECT IN GERMAN. (2 cr; prereq #)

Students complete project under supervision of professors of their choice. Obtain detailed description of project requirements from Department of German.

3342H. MAJOR PROJECT IN GERMAN. (2 cr; prereq #)
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.

3422. STORM AND STRESS. (4 cr; prereq 3104, 3105)

The *Sturm und Drang* period of the late 18th century. Literary criticism, literary works in historical and cultural context.

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.

3432. 19TH CENTURY LITERATURE: 1832-1890. (4 cr; prereq 3104, 3105)

German literature from late romanticism to naturalism.

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.

3450. SENIOR SEMINAR IN GERMAN LITERATURE. (4 cr per qtr; prereq 3104, 3105, two additional German literature courses, #)
Study of one author or a specific aspect of German literature.

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 aesthetics.

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. (4 cr; prereq 1 yr college German or 3 yrs high school German)
Culture and civilization of present-day East and West Germany.

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.

3521. THE GERMAN-AMERICAN EXPERIENCE: ITS LITERARY AND LINGUISTIC ASPECTS. (4 cr; prereq jr or sr or #)
Contribution of German immigrants to American culture, especially in Minnesota.

3590. DIRECTED STUDIES IN GERMAN-SPEAKING COUNTRIES. (5 cr per qtr; prereq 3501, #)

Preparation for research abroad during quarter prior to departure; research completed while abroad. Written reports and oral examinations upon return.

3601. GERMAN LITERATURE IN TRANSLATION: MEDIEVAL LITERATURE. (4 cr; requires no knowledge of German)

3602. GERMAN LITERATURE IN TRANSLATION: THE AGE OF GOETHE. (4 cr; requires no knowledge of German)

3603. GERMAN LITERATURE IN TRANSLATION: MODERN LITERATURE. (4 cr; requires no knowledge of German)

3604. GERMAN LITERATURE IN TRANSLATION AND THE 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. Nov-
elistic 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)
The traditional folklore genres; charms (magic), legends, fairy tales, ballads.

3701. HISTORY OF GERMAN LANGUAGE. (4 cr; prereq 3104, 3105)

3702. BEGINNING MIDDLE HIGH GERMAN. (4 cr; for jrs and srs; prereq 3104, 3105)
Middle High German grammar. Selected literary texts.

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.

5008. GERMAN PROFICIENCY TEACHING IN ACTION. (6 cr [not for CLA degree credit], \$5103; prereq 8 German cr at 3xxx-level or #)
Intensive work with testing and curricular implications of *ACTFL Proficiency Guidelines* combined with intensive proficiency-oriented language instruction in German to improve language skills and to demonstrate and critique various techniques.

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.

5020. GERMAN STYLISTICS. (4 cr [8 cr max]; prereq 5011 or #)
Practice in advanced composition and conversation; discussion and analysis of style levels, theory of stylistics, rhetoric.

5101, 5102. THE ANALYSIS OF GERMAN. (3 cr per qtr)

5101: Phonetics and phonology of modern German.
5102: Morphology and syntax of modern German.

5103. THE ANALYSIS AND TEACHING OF GERMAN. (1 cr; S-N only; prereq #)
Teaching theory and practice.

5331. CULTURAL ANALYSIS. (4 cr; prereq 3511 or 3512 or 3513 or equiv)

Techniques of cultural analysis (contrastive, anthropological, traditional) through examination of literary texts, newspapers, language usage, other sources; "cultural myths" and forms of humor.

5371. THE RADIO PLAY AS LITERARY FORM. (4 cr)

Radio plays by such authors as Dürrenmatt, Frisch, Eich, Jens, Böll, and Grass; unique features dictated by the medium.

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.

5601, 5603. DRAMA IN TRANSLATION. (4 cr per qtr; prereq 8 cr in theatre arts or in literature above 3001; requires no knowledge of German)

5611. GERMANIC HEROIC POETRY IN TRANSLATION. (4 cr)

Overview of all Germanic heroic poetry (Old English, Old Norse, and Old High German). Exploration of the following: definition of the genre, function of heroic poetry in Teutonic society, historicity of Old Germanic epics, and heroic poems as works of art.

5701. STRUCTURE OF GERMAN. (4 cr; prereq 3011, Ling 3001 or 5001, #)

Synchronic analysis of modern German morphology, phonology, and syntax. Comparisons with modern English structure.

5703. INTRODUCTION TO OLD HIGH AND LOW GERMAN. (4 cr; prereq 3702, Ling 3001 or 5001, #)

Readings in Old Saxon, Old East Franconian, and Old Bavarian.

5704. DIALECTS AND THEIR HISTORY. (4 cr; prereq 3702, 5703, Ling 3601 or 5601, #)

Linguistic change and its reflection in German dialect texts from the 8th century to the present.

5705. CHARACTERISTICS OF THE GERMANIC LANGUAGES. (4 cr; prereq 5704, #)
German and Ingvaenic; West, North, and East Germanic; Proto-Germanic and Indo-European.

5801. GERMAN SCRIPT SINCE 1500. (4 cr; reading knowledge of German required)

Handwriting and printed book scripts from 1500 to the 19th century.

5970. DIRECTED STUDIES. (1-5 cr per qtr; prereq #)

Guided individual reading or study.

Major Requirements and Course Descriptions

Dutch (Dtch)

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 languages modalities (listening, reading, speaking, writing) at the intermediate and advanced levels on the ACTFL scale.

1110f,w,s. DUTCH: BEGINNING INDIVIDUALIZED READING, LISTENING, WRITING. (1-15 cr [15 cr max, 1st 3 cr must be completed as a unit], §1101-1102-1103)

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 seven hours per week. Continuation course is 1104.

3011-3012. CONVERSATION AND COMPOSITION. (4 cr per qtr; prereq 1105 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 (e.g., Vondel, Multituli, Bomans).

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 (e.g., Vondel, Multituli, Bomans).

3970. DIRECTED STUDIES. (1-5 cr; prereq 1105 or #)

Guided reading in or study of Dutch literature, culture, or advanced language skills.

Greek-Latin

See Classical Studies.

Health Sciences

CLA students may take up to 16 credits of course work offered by other colleges. The credits may be applied toward CLA degrees, but may not be used to fulfill group distribution requirements. Descriptions of courses in the health sciences can be found in the bulletins of the several

health science 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 Ancient Near Eastern and Jewish Studies.

Hindi

See South and Southwest Asian Studies.

History (Hist)

Staff—Chair, Russell Menard, 614a Social Sciences Building; **Assistant Chair,** Robert McCaa, 614b Social Sciences Building; **Director of Graduate Studies,** Richard Rudolph, 633 Social Sciences Building; **Director of Undergraduate Studies and Honors,** Steven Ruggles, 668 Social Sciences Building

Professors: Altholz, Bachrach, Bamford, Berman, Brauer, Chambers, Farah, Farmer, Howe, Isaacman, Kelly, Kopf, Lehmberg, Marshall, Menard, Munholland, Murphy, Noble, Noonan, Phillips, Reyerson, Rudolph, Samaha, Schwartz, Stavrou, Taylor, Thayer, Tracy, Vecoli, Wright

Associate Professors: J. Evans, S. Evans, Green, Kieft, Maynes, McCaa, Metcalf, Spear

Assistant Professors: Plummer, Pomata, Ruggles, Valdes, Waltner

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 are designed to serve the needs of nonmajors as well as majors. Courses numbered between 5000 and 5500 are open to undergraduate and graduate students with little or no previous work in the subject. Courses numbered above 5500 are pro-seminars (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. Students gain practical experience in research, exhibits, site interpretation, cataloging, and other public history activities. See the director of undergraduate studies for further information.

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 were earned may not be applied to 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:

Four courses (excluding survey courses) in a field of concentration

3955 (Introduction to Historical Research), taken prior to 3961; honors students are required to take a 2 or 3 qtr proseminar with a 55xx or higher designation, in lieu of 3955 and 3961

3961 (Major Paper), completed during senior year

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 period and two courses from the modern period.

2. Geographical: At least one course in each of three different geographical areas.

Language Requirement—The CLA requirement may be satisfied by Route I or Route II. 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 *Description of the Undergraduate Major in History* brochure, with additional information, may be obtained from the Undergraduate Studies office, 668 Social Sciences Building (624-4504).

Minor Sequence

Minor Requirements—Five courses in at least two different cultural areas with no more than two courses being applied to satisfy requirements for the major; four of these courses must be at the 3xxx level (excluding introductory courses) or 5xxx level

No courses may be taken S-N. Courses in which D grades were earned may not be applied to the minor.

The minor program must be approved by the director of undergraduate studies. You must submit a one-page statement explaining your choice of courses and how the courses relate to your career plans, major, or special interests.

Transfer students minoring in history must complete at least two courses at the University of Minnesota.

Introductory

1001f, 1002w, 1003s. INTRODUCTION TO MODERN EUROPEAN HISTORY SINCE THE MIDDLE AGES. (4 cr per qtr, \$1001H, \$1002H, \$1003H, \$3001, \$3002, \$3003; not open to jrs, srs) Staff
1001: Western European civilization to 1715. *1002*: Revolution, liberalism, and nationalism to 1870.
1003: 1870 to recent times.

1051f, 1052w, 1053s. ANCIENT CIVILIZATION. (4 cr per qtr, \$3051, \$3052, \$3053; lects and 1 discussion hr per wk) J Evans, Kelly
1051: The history of civilization of the ancient world to 500 B.C. *1052*: History and civilization of the ancient world, 500-146 B.C. *1053*: History and civilization of the ancient world, 146 B.C. to A.D. 337.

1101. INTRODUCTION TO MEDIEVAL HISTORY. (4 cr) Bachrach, Reyerson
 Europe from the decline of Rome to the early Renaissance: politics, institutions, society, economy, and culture of the Middle Ages.

Major Requirements and Course Descriptions

1151. ENGLISH HISTORY TO THE 17TH CENTURY. (4 cr, §3151) Altholz, Lehmborg

The Anglo-Saxons and Normans; development of English law and Parliament; Reformation and constitutional crisis.

1152. ENGLISH HISTORY FROM THE 17TH CENTURY TO THE PRESENT. (4 cr, §3152)

Altholz, Lehmborg

Civil war, revolution, and constitutional settlement; industrial revolution, democracy, and welfare state.

1301, 1302. AMERICAN HISTORY. (4 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

A 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 will be explored within a comparative historical framework.

1310. TOPICS IN AMERICAN HISTORY. (4 cr per qtr [may be repeated with change of topic]; prereq soph) Staff

Recent topics have included recent religious history, law in American society, film and popular culture.

1401. SURVEY OF LATIN AMERICAN HISTORY: COLONIAL PERIOD TO 1800. (4 cr, §3401)

McCaa, Schwartz

The pre-Hispanic and colonial period to 1800 with emphasis on social, cultural, and economic aspects.

1402. SURVEY OF LATIN AMERICAN HISTORY: 1800-1929. (4 cr, §3402) McCaa, Schwartz

Development of new nations from independence to the emergence of dependent economies.

1403. SURVEY OF LATIN AMERICAN HISTORY: 1929 TO PRESENT. (4 cr, §3403) McCaa, Schwartz

Contradictions of modern societies: economic expansion, dependency, population growth and the social crisis, democratic and authoritarian policies.

1421, 1422. THE WORLD AND THE WEST. (4 cr per qtr, §3421, §3422) Kopf

Survey of the political, economic, and cultural interaction between the peoples of Europe, Africa, America, and Asia. *1421*: Era of Western dominance, 1500-1850—sea power, colonialism, imperialism. *1422*: Modern world of Renaissance, nationalism, modernization and countermodernization, 1850 to present.

1431. HISTORY OF AFRICA TO 1800. (4 cr, §3431) Isaacman

Socioeconomic, political, and cultural development in pre-colonial Africa; emphasis on the slave trade, Islamic revolution, and European commercial penetration.

1432. HISTORY OF AFRICA: 1800 TO PRESENT. (4 cr, §3432) Isaacman

Colonial rule, the forced restructuring and underdevelopment of African economies, African resistance, nationalism, and the problems of independence.

1451. SURVEY OF CIVILIZATIONS IN ANCIENT ASIA. (4 cr, §1451H, §3451) Farmer, Kopf, Marshall, Taylor

A comparative approach to the birth of civilizations in East, South, and West Asia; the ethical protest of Confucius, Buddha, Zoroaster, and others; the rise of the universal empires of the Han, Mauryans, Guptas, Achaemenids, and Sasanids.

1452. SURVEY OF ASIAN CIVILIZATIONS IN THE MIDDLE PERIOD. (4 cr, §1452H, §3452)

Farmer, Kopf, Marshall, Taylor

A comparative approach to the rise of Buddhism, Hinduism, and Islam; the Mongol conquests; the creation of the early modern empires of the Ming, Ch'ing, Mughuls, Safavids, and Ottomans.

1453. SURVEY OF ASIAN CIVILIZATIONS IN THE MODERN ERA. (4 cr, §1453H, §3453) Farmer, Kopf, Marshall, Taylor

A comparative approach to East, South, Southeast, and West Asia from the decline of the early modern empires through the establishment of European and American dominance, cultural renaissance and nationalist movements, and creation of independent nation-states.

1461. INTRODUCTION TO EAST ASIA: EARLY CIVILIZATION. (4 cr, §3461, §EAS 1461) Farmer, Taylor, Waltner

The rise and fall of the first great Chinese empire (Han) and the early history of Vietnam, Korea, and Japan. The origins and development of Chinese society, government, and thought, and the introduction of Buddhism from India.

1462. INTRODUCTION TO EAST ASIA: THE IMPERIAL AGE. (4 cr, §3462, §EAS 1462) Marshall, Taylor, Waltner

Historical survey of early Japan, medieval Vietnam, Korea, and China from the T'ang empire until the end of the 18th century. Diffusion of Chinese and Buddhist cultural forms and maturation of distinctive societies in China, Japan, Vietnam, and Korea.

1463. INTRODUCTION TO EAST ASIA IN MODERN TIMES. (4 cr, §3463, §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.

1951f, 1952w, 1953a. WORLD MILITARY HISTORY: A SURVEY. (2 cr per qtr, §Mil 1011, §Mil 1012, §Mil 1013; may not be used to satisfy requirements for major in history) Staff

1951: From ancient times to the Thirty Years War. *1952*: From 1648 to the Crimean War. *1953*: From the American Civil War to World War II.

1957. EARLY HISTORY OF AIR POWER. (2 cr, §Air 1104; may not be used to satisfy requirements for major in history)

Beginnings of human flight. Early military attitudes toward aviation and development of employment concepts, tactics, and strategies. Early development of air doctrines.

1958. ALLIED AIRPOWER IN WORLD WAR II AND THE BERLIN AIRLIFT. (2 cr, §Air 1105; may not be used to satisfy requirements for major in history)

Uses of airpower in World War II. Development of an independent Air Force. Cold war strategy. Berlin airlift.

1959. MODERN EMPLOYMENT OF AIR POWER. (2 cr, §Air 1106; may not be used to satisfy requirements for major in history)

Effects of air power on tactics and strategy in the modern world. Role of air power in Korea, Cuba, Southeast Asia. Air power advances over past quarter century.

3001f, 3002w, 3003s. INTRODUCTION TO MODERN EUROPEAN HISTORY SINCE THE MIDDLE AGES. (4 cr per qtr, §1001, §1002, §1003, §1001H, §1002H, §1003H) Staff

For description, see 1001, 1002, 1003.

3051f, 3052w, 3053s. ANCIENT CIVILIZATION.

(4 cr per qtr, §1051, §1052, §1053) J Evans, Kelly

For description, see 1051, 1052, 1053.

3151. ENGLISH HISTORY TO THE 17TH CENTURY. (4 cr, §1151) Altholz, Lehmborg

For description, see 1151.

3152. ENGLISH HISTORY FROM THE 17TH CENTURY TO THE PRESENT. (4 cr, §1152) Altholz, Lehmborg

For description, see 1152.

3401. SURVEY OF LATIN AMERICAN HISTORY: COLONIAL PERIOD TO 1800. (4 cr, §1401) McCaa, Schwartz

For description, see 1401.

3402. SURVEY OF LATIN AMERICAN HISTORY: 1800-1929. (4 cr, §1402) McCaa, Schwartz

For description, see 1402.

3403. SURVEY OF LATIN AMERICAN HISTORY: 1929 TO PRESENT. (4 cr, §1403) McCaa, Schwartz

For description, see 1403.

3421, 3422. THE WORLD AND THE WEST. (4 cr per qtr, §1421, §1422) Kopf

For description, see 1421, 1422.

3431. HISTORY OF AFRICA TO 1800. (4 cr, §1431) Isaacman

For description, see 1431.

3432. HISTORY OF AFRICA: 1800 TO PRESENT. (4 cr, §1432)

For description, see 1432.

3451. SURVEY OF CIVILIZATIONS IN ANCIENT ASIA. (4 cr, §1451, §1451H) Farmer, Kopf, Marshall, Taylor

For description, see 1451.

3452. SURVEY OF ASIAN CIVILIZATIONS IN THE MIDDLE PERIOD. (4 cr, §1452, §1452H)

Farmer, Kopf, Marshall, Taylor

For description, see 1452.

3453. SURVEY OF ASIAN CIVILIZATIONS IN THE MODERN ERA. (4 cr, §1453, §1453H) Farmer, Kopf, Marshall, Taylor

For description, see 1453.

3461. INTRODUCTION TO EAST ASIA: EARLY CIVILIZATION. (4 cr, §1461, §EAS 1461) Farmer, Taylor, Waltner

For description, see 1461.

3462. INTRODUCTION TO EAST ASIA: THE IMPERIAL AGE. (4 cr, §1462, §EAS 1462) Marshall, Taylor, Waltner

For description, see 1462.

3463. INTRODUCTION TO EAST ASIA IN MODERN TIMES. (4 cr, §1463, §EAS 1463) Farmer, Marshall

For description, see 1463.

Honors

1001Hf, 1002Hw, 1003Hs. HONORS COURSE: INTRODUCTION TO MODERN EUROPEAN HISTORY SINCE THE MIDDLE AGES. (4 cr per qtr, §1001, §1002, §1003, §3001, §3002, §3003; not open to

jrs, srs; prereq #) Staff

For description, see 1001, 1002, 1003.

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.

1301H, 1302H. HONORS COURSE: AMERICAN HISTORY. (4 cr per qtr, §1301, §1302; prereq #) Staff

For description, see 1301, 1302.

1451H. HONORS COURSE: SURVEY OF CIVILIZATIONS IN ANCIENT ASIA. (4 cr, §1451, §3451; prereq #) Farmer, Kopf, Marshall, Taylor

For description, see 1451.

1452H. HONORS COURSE: SURVEY OF ASIAN CIVILIZATIONS IN THE MIDDLE PERIOD.

(4 cr, §1452, §3452; prereq #) Farmer, Kopf, Marshall, Taylor

For description, see 1452.

1453H. HONORS COURSE: SURVEY OF ASIAN CIVILIZATIONS IN THE MODERN ERA. (4 cr, §1453, §3453; prereq #) Farmer, Kopf, Marshall, Taylor

For description, see 1453.

Major Requirements and Course Descriptions

3951-3952†. 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

3020. TOPICS IN FAMILY HISTORY. (4 cr) S Evans, Maynes, Ruggles
Covers a wide range of topics: women, work, and family; United States and European comparative family history.

3031, 3032, 3033. MEDICINE AND DISEASE IN HISTORY. (4 cr per qtr, \$HMed 3001, 3002, 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.

3043. ISLAM AND NATIONALISM. (4 cr) A comparative analysis of modern political movements in the Middle East, India, and Africa, and the ideological role of Islam.

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.

3797. LIFE AGAINST DEATH: POPULATION CRISES IN THE PAST. (4 cr) Maynes, McCaa, 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; taken prior to 3961) Staff
Practical course. Use of documents and different kinds of historical writing. Students read and discuss material representative of contrasting historical perspectives. Faculty guidance in sections limited to 15 students.

3960. INTERNSHIP. (4-5 cr per qtr [10 cr max]; prereq #, CLA approval) Staff
Internship with historical society, government, or community organization, arranged through and supervised by department.

3961f,w,s. 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 department 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 standing in history, 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 one postsurvey course in any social science) 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.

5013. DOCUMENTARY RESEARCH FOR HISTORICAL ARCHAEOLOGY. (1 cr; prereq #)
Practical introduction to documents and research strategies useful in study of archaeological sites.

5015. LIBRARIES AND ARCHIVES AS RESOURCES FOR RESEARCH. (2 cr) Hinding, Grigg
Library reference tools, monographs and serials, special collections, data bases, and local archives. Skills in using libraries and archives. Research opportunities available.

5035. THE GERM THEORY AND THE MEDICAL PROFESSION. (4 cr, \$HMed 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.

5255. POLITICAL PARTIES TO 1789: EUROPE AND AMERICA. (4 cr; prereq #) Metcalf
Comparative study of the origins, development, and functions of political parties in England, Sweden, and the Anglo-American colonies, 1688-1789, incorporating literature from both history and political science.

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.

African History

3434. HISTORY OF ISLAM, ISLAMIC CIVILIZATION AND POLITICS IN AFRICA.
The spread of Islam; its socioeconomic and political consequences. Islam as a contemporary political ideology.

5432. PROBLEMS IN CONTEMPORARY AFRICA. (4 cr)

The problems of political, social, and economic development in Africa since World War II. Postindependence politics and problems of southern Africa.

5436. SOCIAL HISTORY OF AFRICAN WOMEN: 1850 TO PRESENT. (4 cr; prereq #) Staff

An 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.

5444, 5445. PROBLEMS IN CENTRAL AND SOUTHERN AFRICAN HISTORY. (4 cr per qtr;

also open to sophs who have passed 1431, 1432) Isaacman
The nature and process of change in precolonial, colonial, and independent Central and South Africa.

5447. PROBLEMS IN EAST AFRICA. (4 cr)

Isaacman
Advanced course. Focus on specific themes and methodological problems.

American History**3347. WOMEN IN COLONIAL AND VICTORIAN AMERICA: 1600-1890.** (4 cr) 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.

3357, 3358. SOCIAL HISTORY OF THE UNITED STATES: 19TH CENTURY. (4 cr) Ruggles

Examines selected themes in social history of the United States in the 19th century.

3801. THE PEOPLE OF EARLY AMERICA TO 1750. (4 cr) Menard, Ruggles

A multi-cultural approach to early American history, focusing on the interactions of Africans, Europeans, and Native Americans 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) 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) 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) 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, Douglas, and the crisis of secession; the rise and fall of the Confederacy; Grant, Sherman, and the politics of total war; emancipation; presidential and radical reconstruction; the Ku Klux Klan; the origins of the Gilded Age; redemption and the Compromise of 1877.

3813. POLITICS AND SOCIETY IN GILDED-AGE AMERICA, 1877-1900. (4 cr) Noble

From Grant to Theodore Roosevelt; robber barons and the industrial revolution; bossism and liberal reform; the West and the plight of the American Indian; origins of the new South; ethnocultural politics; populism and the agrarian revolt; the crisis decade of the 1890s; organized labor and radical politics; emergence of progressivism; imperialism and the Spanish-American War.

3821. UNITED STATES IN THE 20TH CENTURY: 1890-1917. (4 cr) 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 facism 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 counter-culture; the women's movement and gay liberation; Watergate and the uncertainties of the 1970s; The Reagan counter-revolution.

Major Requirements and Course Descriptions

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 preindustrial 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 preindustrial 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) 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) Plummer

From African background to Reconstruction period.

3865. AFRO-AMERICAN HISTORY. (4 cr, §Afro 3865) Plummer

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) Tsuchida
Experience of Asians in the United States from 1850 to the present examined from the perspective of a minority.

3871. AMERICAN INDIAN HISTORY FROM MID-15TH CENTURY TO 1850. (4 cr, §AmIn 3111)

Colonization and survival of North American Indians from rise of ancient American Indian civilizations to beginnings of reservation era.

3872. AMERICAN INDIAN HISTORY: 1850 TO PRESENT. (4 cr, §AmIn 3112)

American Indian communities from reservation era to present, emphasizing impact of federal Indian policy.

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.

3901. URBAN HISTORY OF PREINDUSTRIAL AMERICA. (4 cr) Ruggles

Role of cities and urbanization in a largely agricultural society. Population, social and geographical relationships, government and institutions, cultural change. Emphasis on national perspective, with illustrative case studies.

3902. URBAN HISTORY OF INDUSTRIAL AMERICA. (4 cr) Ruggles

Role of cities and urbanization in industrial and postindustrial United States. Population, social and geographical relationships, government and institutions, cultural change, progressive reform with some view toward post-World War II suburbia. National perspective, with illustrative case studies.

3910. TOPICS IN AMERICAN HISTORY. (4 cr) 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.

5009. HISTORY OF THE AMERICAN INDIAN POPULATION. (4 cr, §Soc 5571)

Examination of the population (demographic) history of American Indians in what is now called the United States. Focus on pre-European contact size of this population, its drastic decline from first European contact until the turn of this century, and its recent partial recovery.

5045. MEDICAL PROFESSION IN AMERICA. (4 cr, §HMed 5045) Eyler

The American medical profession in the 19th and 20th centuries emphasizing the role of institutions, influence of social and moral values, the consequences of specialization and scientific innovation.

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.

5336, 5337. CRIMINAL JUSTICE IN AMERICAN HISTORY. (4 cr per qtr; prereq jr, sr or grad student) Samaha

Social, political, and intellectual context of crime, justice, and punishment. *5336*: Colonial morality prosecutions, witchcraft, early forms of punishment, urban violence, rise of the penitentiary, professional police. *5337*: Changing patterns of crime, the criminal class, southern justice, political justice, the politics of law and order, criminal justice "reform," Watergate and beyond.

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 PRESENT. (5 cr; prereq #) Brauer

Russian-American relations since the Russian Revolution; political, diplomatic, economic, and military problems; American foreign policy.

Ancient History**3509. MILITARY HISTORY OF THE ANCIENT WORLD.** (4 cr) Kelly

The 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

The origins and development of historical thought in the ancient world.

5061. HISTORY OF GREECE TO 600 B.C. (4 cr) Kelly

Political, economic, and social developments from the first appearance of the Greeks to ca. 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, 5074. HISTORY OF ROME. (4 cr per qtr) J Evans

5071: To 133 B.C. *5072*: 133 B.C. to 31 B.C. *5073*: 31 B.C. to A.D. 235. *5074*: A.D. 235 to A.D. 395.

History of Asia and the Middle East**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) 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 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.

Major Requirements and Course Descriptions

3471. 20TH-CENTURY JAPAN. (4 cr, §5471, §EAS 3471) Marshall

The development of an industrial society, parliamentary government, mass culture, and imperialism from the Meiji reforms of the late 19th century through World War II to the contemporary period.

3472. EARLY MODERN JAPAN. (4 cr, §5472, §EAS 3472) Marshall

Tradition and change in society and culture under the Tokugawa shoguns, 1600-1867; the growth of cities and decline of the samurai class; response to Western intrusion.

3480. TOPICS IN THE HISTORY OF INDIA. (4 cr per qtr) 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.

3482. MUGHAL INDIA. (4 cr) Kopf

Muslim-Hindu interaction; the Mughal empire, 12th through 18th centuries.

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, §MidE 3491) 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 the Arab Islam in shaping Islamic civilization, 650-1350 A.D.

3505. SURVEY OF THE MIDDLE EAST. (4 cr, §MidE 3505, 5505) 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, §MidE 3541, 3542, 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) 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.

5274, 5275. MODERN NEAR EAST: OTTOMAN EMPIRE AND SUCCESSOR STATES. (4 cr per qtr) Stavrou

5274: The 19th century; 18th-century background and Ottoman institutions. *5275*: From the Congress of Berlin to the present; the rise of Near Eastern nationalism.

5461. ANCIENT CHINA. (4 cr) Taylor
Origins of Chinese civilization, classical philosophies, and the Han empire (to 220 A.D.).

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 A.D.).

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.

5465. CHINA'S RESPONSE TO THE WEST, 1750-1911. (4 cr, §3465, §EAS 3465) Farmer, Waltner
For description, see 3465.

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 PRESENT. (4 cr, §3468, §EAS 3468) Farmer
For description, see 3468.

5471. 20TH-CENTURY JAPAN. (5 cr, §3471, §EAS 3471) Marshall
For description, see 3471.

5472. EARLY MODERN JAPAN. (5 cr, §3472, §EAS 3472) Marshall
For description, see 3472.

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.

English History

3161. BRITISH IMPERIALISM. (4 cr)
History of the British Empire since the end of the American Revolution; the rise of nationalist movements among Britain's colonial subjects; new nations and new imperialism; Marxist and other theories of colonialism; colonial literature by Kipling and others.

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) 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).

5141. RULE OF LAW IN TUDOR-STUART ENGLAND. (4 cr; prereq jr, sr or grad student) Samaha
Discretion, law, and prerogative in 16th-century English government; formation and implementation of public policy, using criminal law as a case study. Stresses law in practice as opposed to law in books.

5142. LAW AND THE 18TH-CENTURY ENGLISH CONSTITUTION. (4 cr; sr or grad student) Samaha
Nature of English law and the Constitution, emphasizing their relation to the formation of the American constitutional and legal systems, especially criminal law. Use of actual cases and criminal law materials.

5171f, 5172w, 5173s. 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*: From the industrial revolution to the present.

3224. EUROPE DURING WORLD WAR II. (4 cr, §3722) Staff
Origins and diplomatic background of the war; strategic objectives and campaigns; political and social impact.

3244. HISTORY OF EASTERN EUROPE TO THE EARLY 19TH CENTURY. (4 cr) Rudolph
Peoples of Poland, Czechoslovakia, Hungary, Rumania, 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, Rumania, and Yugoslavia. Nationalism and formation of national states; fascism and World War II; Jews in Eastern Europe; communist takeovers; society in communist Eastern Europe today.

3271. THE VIKINGS AT HOME AND AWAY. (4 cr, §Scan 3271) 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.

3272. EARLY MODERN SCANDINAVIA TO 1807. (4 cr, §Scan 3272) Metcalf
The centralization of state power and the Reformation; struggle for control of the Baltic; Gustavus Adolphus and Charles XII; absolutism in the North; social and economic transformation of Scandinavia.

3273. MODERN SCANDINAVIA SINCE 1807. (4 cr, §Scan 3273) 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.

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.

3613. HISTORY OF THE CRUSADES. (4 cr) Bachrach, Reyerson
Results of the medieval crusades from ca. 1095 to 1285.

3614. WOMEN IN MEDIEVAL EUROPE, CA. 500-1500. (4 cr) Reyerson
Women in medieval European society from the royal court and secluded nunnery to the urban workshop and peasant hovel.

Major Requirements and Course Descriptions

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.

3622. REVOLT OF THE NETHERLANDS, 1566-

1618. (4 cr) Tracy

From the waning of the Middle Ages to the revolt against Spain.

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 ENLIGHTEN-

MENT. (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.

3632. HISTORY OF GERMANY: ABSOLUTISM

AND REVOLUTION, 1648-1848. (4 cr) Maynes

Postwar devastation, the politics of absolutism, baroque Germany, everyday life in town and country, the revolution of 1848.

3633. HISTORY OF GERMANY: EMPIRE TO

HITLER, 1848-1945. (4 cr) 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) Noonan

A survey of Russian history: origins to Peter the Great.

3637. RUSSIAN HISTORY FROM PETER THE

GREAT TO THE PRESENT.

(4 cr) Stavrou

A survey of Russian history since Peter the Great.

3681. MODERN IRISH HISTORY. (4 cr) Altholz

History of Ireland since 1535 with emphasis on the period of the union with Britain, 1800-1922.

3700. TOPICS IN EUROPEAN HISTORY. (4 cr)

Staff

Topics vary and may include imperialism, psychohistory, biography in European history, urbanization.

3704. DAILY LIFE IN EUROPE, 1348-1750. (4 cr)

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.

3706. EUROPEAN AGRICULTURE, ROME TO

PRESENT. (4 cr) Wright

Discussion of both agricultural technology and the social conditions surrounding agricultural production as they have evolved over the last 2000 years.

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.

3715. SPAIN UNDER THE HABSBURGS, 1516-

1701. (4 cr) 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) 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.

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; socio-economic 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.

3767. EASTERN ORTHODOXY: HISTORY AND

CULTURE. (4 cr) Stavrou

Eastern Christendom from Byzantium to the present; definition of the Christian East; political and cultural impact on the Near East and the Slavic world. "The great church in captivity"; nationalism and the Orthodox church; orthodoxy in a revolutionary age.

3775. HISTORY OF THE EUROPEAN JEWS FROM THE MIDDLE AGES TO THE PRESENT.

(4 cr; offered 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.

3779. RELIGIOUS HISTORY OF MODERN EUROPE.

(4 cr) Altholz
Churches and religious movements in Europe from 1648 to the early 20th century; issues of church and society and the impact of secular thought upon religion.

5100. SELECTED TOPICS IN MEDIEVAL EUROPE.

(4 cr per qtr; prereq #) Bachrach, Reyerson
From the fall of the Roman Empire through the end of the Middle Ages.

5115. MEDIEVAL LATIN HISTORIANS.

(4 cr; prereq 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.

5132. RUSSIAN HISTORY FROM THE ORIGINS TO PETER THE GREAT.

(4 cr) Noonan
A survey of Russian history, origins to Peter the Great.

5133. RUSSIAN HISTORY FROM PETER THE GREAT TO THE PRESENT.

(4 cr) Stavrou
A survey of Russian history since Peter the Great.

5134. RUSSIA BEFORE THE MONGOL CONQUEST.

(4 cr) Noonan
The origins and development of the Kievan state, 850-1240.

5135. FROM KHAN TO TSAR: RUSSIA, 1240-1530.

(4 cr) 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, enslavement of the peasantry.

5137. THE NOMADS OF SOUTHERN RUSSIA FROM THE SCYTHIANS TO THE MONGOLS, 600 B.C.-1300 A.D.

(4 cr) 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) Bamford
France to the Revolution of 1789.

5212. FRENCH REVOLUTION AND NAPOLEON.

(4 cr) Bamford
The reform movement and upheavals in France to 1799; the emergence and rise to power of Bonaparte; the Napoleonic regime.

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 BACKGROUND.

(4 cr) 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.

5276. INTELLECTUAL AND CULTURAL HISTORY OF MODERN GREECE.

(5 cr) Stavrou
Literary and cultural contributions of modern Greece in national and European contexts.

5284. DIPLOMATIC HISTORY OF EUROPE, 1789-1871.

(4 cr) Kieft
The French Revolution; Napoleonic wars; Congress of Vienna; 1848 revolutions; unification of Germany and Italy.

5285. DIPLOMATIC HISTORY OF EUROPE, 1871-1918.

(4 cr) Kieft
The Bismarck alliance system; the Eastern question; overseas imperialism; World War I.

5286. DIPLOMATIC HISTORY OF EUROPE, 1918-PRESENT.

(4 cr) Kieft
The interwar period; causes of World War II; the cold war; the Middle East.

Latin American History**3410. TOPICS IN LATIN AMERICAN HISTORY.**

(4 cr per qtr) McCaa, Schwartz
Topics vary and may include culture conflict, slavery, urbanization, revolution.

Major Requirements and Course Descriptions

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.

3412. HISTORY OF BRAZIL, 1808 TO PRESENT.

(4 cr) Schwartz

Major themes of modern Brazilian history with emphasis on political and economic aspects.

3423. CARIBBEAN HISTORY. (4 cr, §Afro 3421)

Plummer

Key themes and major events in the Caribbean from initial European contact to emergence of independent states. The tension between local development and metropolitan ambitions.

3424. HISTORY OF MEXICO: PRE-COLUMBIAN PERIOD THROUGH INDEPENDENCE.

(4 cr) McCaa, Schwartz

Indian cultures of Mexico prior to 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

The struggle for land and liberty from the Hidalgo revolt to the age of oil.

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 seventies.

3427. HISTORY OF CUBA AND PUERTO RICO.

(4 cr, §Chic 3427) Valdes

Historical development 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, §Chic 3428) Valdes

U.S.-Mexico relations in 19th and 20th centuries.

3441. THE SPANISH-MEXICAN BORDERLANDS AND THE CHICANO EXPERIENCE TO 1900. (4 cr, §Chic 3441) Valdes

The history of Chicanos to 1900.

3442. SURVEY OF CHICANO HISTORY, 1900 TO PRESENT. (4 cr, §Chic 3442) Valdes

Twentieth-century Chicano experience including migration and repatriation, contemporary politics, society and culture.

5420. TOPICS IN LATIN AMERICAN HISTORY.

(4 cr per qtr; prereq #) McCaa, Schwartz, Valdes
Historical themes common to the entire Latin American area. Topics change from quarter to quarter.

Proseminars

5514. TOPICS IN MING AND CH'ING HISTORY, 1350-1800. (4 cr per qtr; 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.

5517. CHINESE INTELLECTUAL HISTORY:

20TH CENTURY. (4 cr; prereq #) Farmer

Cultural change and intellectual currents leading up to the May 4th Movement of 1919. Major disputes and problems growing out of that period.

5518. CHINESE INTELLECTUAL HISTORY:

MAO TSE-TUNG AND MARXISM. (4 cr; prereq #)

Farmer

The introduction of Marxism to China; the thought and writings of Mao Tse-tung, and questions of cultural identity and values in the People's Republic of China.

5519. TOPICS IN CHINESE HISTORY. (5 cr; pre-

req #) Farmer

Topics in recent Chinese history.

5521. INTRODUCTORY PROSEMINAR ON THE

MEIJI REVOLUTION IN JAPAN. (4 cr; prereq #)

Marshall

Readings in English on the reforms from 1868 to 1912 and their economic, social, political, and cultural consequences.

5522. CURRENT ISSUES IN JAPANESE HIS-

TORY. (4 cr; prereq #) Marshall

Readings in English on current interpretations and topics in Japanese history.

5547. HISTORIOGRAPHY OF MODERN

SOUTH ASIA. (5 cr; prereq #) Kopf

Historical literature of modern South Asia; the major problems facing students in the field.

5561f-5562w-5563sf. ANCIENT GREEK HIS-

TORY. (3 cr per qtr; prereq #) Kelly

5571-5572-5573f. PROSEMINAR: ROMAN HIS-

TORY. (3 cr per qtr; prereq #) J Evans

5611f, 5612w, 5613s. MEDIEVAL HISTORY. (3 cr

per qtr; prereq 1 yr of medieval history or equiv, reading knowledge of French or German, #) Bachrach, Reyerson

5621. THE ITALIAN RENAISSANCE. (3 cr; pre-

req #) Pomata, Tracy

Humanism; political development of city-states.

5625. THE GERMAN REFORMATION. (3 cr; pre-

req #) Tracy

Luther; urban religious movements; the Catholic Reformation.

5630. INTRODUCTORY PROSEMINAR IN

EARLY MODERN EUROPE. (4 cr per qtr; prereq

#) Staff

Critical examination of historical literature dealing with selected topics in early modern European history, ca. 1450-1750.

5651f-5652w-5653st. ENGLISH HISTORY: TU-DOR AND STUART PERIODS. (3 cr per qtr; prereq #) Lehmsberg

Critical study of principal writings about English history. 5651: 1485-1558. 5652: 1558-1625. 5653: 1625-1689.

5671f-5672w-5673st. MODERN ENGLAND: 1783 TO THE PRESENT. (3 cr per qtr; prereq #) Altholz

5710. INTRODUCTORY PROSEMINAR IN 18TH- AND 19TH-CENTURY EUROPE. (4 cr per qtr; 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.

5711f-5712w-5713st. FRENCH REVOLUTION AND NAPOLEON. (3 cr per qtr; prereq #) Bamford

5720. INTRODUCTORY PROSEMINAR IN CONTEMPORARY EUROPE. (4 cr per qtr; 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. (3 cr per qtr; prereq #) Munholland

5721: Background and impact of World War I. 5722: Interwar years and World War II.

5741f-5742w†. GERMANY AND CENTRAL EUROPE IN 18TH CENTURY. (3 cr per qtr; prereq #) Wright

Enlightenment, reason, reform, war.

5744-5745. TOPICS IN MODERN GERMAN HISTORY. (3 cr per qtr; prereq #) 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. (3 cr per qtr) Stavrou

Evolution of modern Greece from the middle of the 18th century to the present. 5756: Political, cultural, and socio-economic factors which contributed to Greek nationalism and the establishment of independent Greece. 5757: Political and cultural developments in the 20th century.

5761f-5762w-5763st. RUSSIAN HISTORY. (4 cr per qtr; prereq reading knowledge of Russian, German or French, #) Stavrou

5772, 5773. SCANDINAVIAN HISTORY. (3 cr per qtr. \$Scan 5772, 5773; prereq reading knowledge of one Scandinavian language or Finnish, #) Metcalf
Topics and chronological emphasis vary from year to year.

5774-5775†. READINGS IN THE MODERN NEAR EAST. (4 cr per qtr; prereq 5274, 5275 or equiv, #) Stavrou

Significant disruptive forces in the Ottoman Empire during the last two centuries of its existence. The role of and relations between Islamic and non-Islamic groups of the empire.

5777-5778†. HISTORY OF THE HABSBURG MONARCHY. (3 cr per qtr; prereq #) Wright

5781-5782†. MODERN EUROPEAN INTELLECTUAL HISTORY. (3 cr per qtr; prereq #) Thayer

5784-5785. DIPLOMATIC HISTORY OF 19TH- AND 20TH-CENTURY EUROPE. (3 cr per qtr; prereq #) 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.

5791f-5792w†. SOCIAL AND ECONOMIC HISTORY OF MODERN EUROPE SINCE 1750. (3 cr per qtr; prereq #) Rudolph

5797. METHODS OF HISTORICAL DEMOGRAPHY. (4 cr; prereq #) Phillips, 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. (3 cr per qtr; prereq #) 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.

5817-5818†. 19TH-CENTURY U.S. POLITICAL HISTORY. (4 cr per qtr; prereq #)

Readings about the history and historiography of 19th-century American politics; social analysis of politics. 5817: 1789 to 1850. 5818: From the election of Abraham Lincoln to the progressive era.

5821-5822†. AMERICAN HISTORY IN 20TH CENTURY. (4 cr per qtr; prereq #) Chambers

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

Major Requirements and Course Descriptions

5844f, 5845w. AMERICAN LABOR HISTORY.

(3 cr per qtr; prereq #) Berman
Readings in the classics of American labor history literature. Research methods and materials in labor history.

5854-5855†. AMERICAN URBAN HISTORY.

(4 cr per qtr; prereq #) Ruggles
Historical literature on U.S. urbanization, cities, and urban social relations; social history, demography, geography, urban politics, and institutions. Historiographical or research paper required.

5857-5858†. PROSEMINAR: SOCIAL HISTORY OF AMERICAN WOMEN.

(4 cr per qtr; prereq #) 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.

(3 cr per qtr; prereq #) Vecoli
Readings in historiography of immigration and ethnic groups.

5864, 5865. AFRO-AMERICAN HISTORY.

(4 cr per qtr) Staff

5871f-5872w†. INTELLECTUAL HISTORY OF UNITED STATES IN 19TH, 20TH CENTURIES.

(3 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.

(3 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.

5901f, 5902w, 5903s. LATIN AMERICAN HISTORY.

(4 cr per qtr; prereq reading knowledge of Spanish, #) McCaa, Schwartz, Valdes
Designed to introduce beginning graduate students to major historical writings on various Latin American themes.

5930. TOPICS IN COMPARATIVE THIRD WORLD HISTORY.

(4 cr per qtr; prereq #) Isaacman, Kopf, McCaa, Schwartz
Recurring themes in third world history.

5931. HISTORY OF AFRICA: SOCIAL GROUPING, CONFLICTS.

(3 cr; prereq #)
The rise of social differentiations in precolonial and contemporary African societies; how this process affects formation and development.

5932. AFRICAN HISTORIOGRAPHY.

(3 cr; prereq #) Isaacman
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.

(3 cr; prereq #) Isaacman
The process of historical reconstruction in nonliterate societies; collection and interpretation of oral traditions.

5940-5950. HISTORICAL TOPICS: MEDICINE AND THE MODERN STATE.

(4 cr per qtr [16 cr max], \$HMed 5120-5130; prereq #) Eyler
Topics vary from year to year. Emphasis on mid-18th century to present.

5957. SOCIAL HISTORY OF ANGLO-AMERICAN LAW.

(3 cr; prereq #) Samaha
Law as a cultural and social institution, rather than as a means to social control. Law in action as opposed to law in books; law and institutions in the legal order related to social, cultural, and economic developments.

5960. RESEARCH IN QUANTITATIVE HISTORY.

(4 cr per qtr; prereq 5011 or 5797, #) McCaa, Ruggles
Workshop to expand on projects completed in 5011, 5797, or other history courses.

5961-5962. EXPANSION OF EUROPE.

(3 cr per qtr; prereq #) Bamford

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, 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, 3032, 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. (3 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.

5102. MEDICINE AND SOCIETY IN THE ENLIGHTENMENT. (4 cr) Eyler

Readings and research seminar dealing with interrelations of medicine and society from late 17th to early 19th centuries. Emphasis on methods and materials used by medical historians.

5120-5130. HISTORICAL TOPICS: MEDICINE AND THE MODERN STATE. (4 cr per qtr [16 cr max], §Hist 5940-5950) Eyler

Topics vary from year to year. 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—Coordinator, Roger H. Stuewer, 438 Physics; **Director of Graduate Studies,** Edwin T. Layton, 138 Mechanical Engineering; **Director of Undergraduate Studies,** Alan E. Shapiro, 419 Physics

Professors: Layton, Shapiro, Stuewer

Associate Professors: Beatty, Norberg

The history of science and technology studies 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.

Major Requirements and Course Descriptions

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.

3711, 3712, 3713. TECHNOLOGY AND WESTERN CIVILIZATION. (4 cr per qtr, §1711, §1712, §1713)

For description, see 1711, 1712, 1713.

3811, 3812, 3813. INTRODUCTION TO HISTORY OF SCIENCE. (4 cr per qtr, §1811, §1812, §1813)

For description, see 1811, 1812, 1813.

3825. PHYSICS AND SOCIETY IN 20TH-CENTURY AMERICA. (4 cr, §3835, §5825) Stuewer
Nineteenth-century heritage; 20th-century discoveries and physical theories; growth of physics in America after World War I; the intellectual migration of the 1930s; nuclear physics, the Manhattan project, and the atomic bomb; McCarthyism and Oppenheimer; current and past contributions of Minnesota physicists.

3835. THE ATOMIC AGE. (4 cr, §3825, §5825) Stuewer

Development of nuclear energy in the 20th century; construction and use of the bomb; postwar military and political impact.

5011. THEORIES OF COLOR: NEWTON TO HELMHOLTZ. (4 cr) Shapiro

Physical and physiological investigations of color from the 17th to the mid-19th centuries, focusing on the fundamental contributions of Newton, Young, Maxwell, and Helmholtz.

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; prereq 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.

5311. TECHNOLOGY IN AMERICAN LIFE. (4 cr) Norberg

Technology in America with emphasis on its impact on society and culture. Traces the growth of American technology in its cultural and intellectual context from colonial period to present.

5321. HISTORY OF COMPUTING. (4 cr) 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.

5511. WHAT SCIENCE WAS. (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 of "explanation," "hypothesis," "evidence," etc. have changed through time.

5760. SELECTED TOPICS. (1-5 cr per qtr; prereq #)

5825. PHYSICS AND SOCIETY IN 20TH-CENTURY AMERICA. (4 cr, §3825, §3835) Stuewer
For description, see 3825.

5924. HISTORY OF 19TH-CENTURY PHYSICS. (4 cr, §Phys 5924; prereq general physics or #) Stuewer

Conceptual developments in physics in 19th century (Young, Fresnel, Oersted, Ampère, Faraday, MacCullagh, Maxwell, Hertz, Lorentz, Lavoisier, Rumford, Dalton, Mayer, Joule, Helmholtz, Carnot, Clausius, Kelvin, Boltzmann, Mach, others). Relationships of these developments to social, philosophical, and theological influences.

5925. HISTORY OF 20TH-CENTURY PHYSICS. (4 cr, §Phys 5925; prereq general physics or #) Stuewer

Conceptual developments in relativity (Michelson, Lorentz, Poincaré, Einstein, others), and quantum mechanics (Planck, Einstein, Rutherford, Bohr, Sommerfeld, Ehrenfest, Pauli, Millikan, Compton, Heisenberg, de Broglie, Schrödinger, Born, others). Relationships of these developments to social, philosophical, and theological influences.

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 Home Economics

CLA students may take up to 16 credits of course work offered by other colleges. The credits may be applied toward CLA degrees, but may not be used to fulfill group distribution requirements. Descriptions of courses offered by the College of Home Economics can be found in the bulletin of that college.

Honors Program

Staff—Director, Glen E. Holt, 115 Johnston Hall

The CLA honors program is described fully in the first section of this bulletin. Honors course offerings consist of departmental 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. Description of Honors Seminars and Colloquia for the current quarter are available in 115 Johnston Hall.

Honors Colloquium (HCol)

1010-1090. HONORS COLLOQUIUM. (2-4 cr per qtr; prereq fr, soph, honors div regis)
Topics change each quarter.

1110-1190. HONORS COLLOQUIUM. (2-4 cr per qtr; prereq fr, soph, honors div regis)
See description for 1010-1090.

1970. DIRECTED STUDIES. (1-4 cr per qtr; prereq fr, soph, honors div regis, #, Δ)
For additional research related to a colloquium topic.

Honors Seminar (HSem)

3010-3080. HONORS SEMINAR. (4 cr per qtr; prereq jr, sr, honors div regis)
Topics change each quarter.

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq jr, sr, honors div regis, #, Δ, college approval)
For additional research related to a seminar topic.

Humanities (Hum)

Staff—Chair, John Archer, 320 Ford Hall; **Director of Undergraduate Studies,** George Klinger, 243 Ford Hall

Professors: D'Andrea (on leave, 1986-88), Hershbell, Leppert (on leave 1986-87), Lincoln, Tapp

Associate Professors: Archer, Yu (on leave, 1985-87)

Assistant Professors: Klinger, Mowitz, Thomas

Humanities offers integrated cross-cultural study of eras of civilization and major humanistic problems, drawing on literature, philosophy, history, the arts, and relevant aspects of the social and natural sciences. This breadth of perspective provides an understanding of men and women as heirs to and creators of civilization, concerned with values and the development of the whole person.

B.A. Major Sequence

Major Requirements—A. Humanities courses, minimum of 49 cr to include: 1301; six courses in the Western culture sequences (at least two courses in both the European heritage and modern world sequences with at least three being topics courses); two courses in non-Western cul-

Major Requirements and Course Descriptions

ture (see list of approved courses available in humanities advisers' offices); major project; one proseminar; any two additional humanities courses

B. Concentration, minimum of 16 cr: four 3xxx-5xxx courses relevant to your declared area of concentration, approved by your adviser, from liberal arts departments and programs (see list of approved units in humanities advisers' offices)

Up to five courses beyond Hum 1301 may be taken at the 1xxx level, with a maximum of three 1xxx-level courses from the European heritage-modern world sequences. Up to four courses applied to requirements A and B together, excluding 3xxx-5xxx humanities courses, may be taken on S-N grading.

Minor Sequence

Minor Requirements—European Focus: 1301; three courses from the European heritage-modern world sequences (at least one course in each sequence and at least one 3xxx-5xxx topics course); at least one additional 3xxx-5xxx Hum course (may be a proseminar)

Non-Western Focus: 1301; two courses from 1201, 1202, 1211, 1212, 1241, 3291, 3292, 3293, 3294, 5831 (at least one 3xxx-5xxx course); two additional 3xxx-5xxx Hum courses (may include a proseminar)

You must complete at least 15 credits of 3xxx-5xxx Hum courses for the minor. No more than 20 percent of the total program credits may be taken on S-N grading. No more than 20 percent of the total 3xxx-5xxx credits may consist of directed study, directed instruction, or independent study courses.

Western Survey Courses: The Modern World

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 counter statements; 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 ca. 1914-1940. Ideas and forms of society and culture: Leninist, fascist-Nazi, Freudian, neo-orthodox. Expressionism, dada, surrealism. Integrative study of works by creative figures such as Lenin, Freud, Kafka, Eliot, Duchamp, Klee, Kollwitz, Dali, Picasso, Stravinsky, Schönberg, Bartók, Wright, Gropius.

1005. HUMANITIES IN THE MODERN WORLD V. (4 cr)

The Western world since 1945. Existentialism, "the absurd"; searches for identity, commitment; religious trends; influence of oriental spiritual traditions. Integrative study of works by such creative figures as Camus, Sartre, Genet, Ionesco, Buber, Bultmann, Hesse, Watts, Pollock, Warhol, Stockhausen, Cage, Le Corbusier.

Western Topics Courses: The Modern World

3091. TOPICS: THE EIGHTEENTH CENTURY. (4 cr; prereq 1001 or #)

Interdisciplinary consideration of specialized problems in 18th-century art, thought, society, with attention to critical theory and method.

3092. TOPICS: THE EARLIER NINETEENTH CENTURY. (4 cr; prereq 1002 or #)

Interdisciplinary consideration of specialized problems in earlier 19th-century art, thought, society, with attention to critical theory and method.

3093. TOPICS: THE LATER NINETEENTH CENTURY. (4 cr; prereq 1003 or #)

Interdisciplinary consideration of specialized problems in later 19th-century art, thought, society, with attention to critical theory and method.

3094. TOPICS: THE EARLIER TWENTIETH CENTURY. (4 cr; prereq 1004 or #)

Interdisciplinary consideration of specialized problems in earlier 20th-century art, thought, society, with attention to critical theory and method.

3095. TOPICS: THE LATER TWENTIETH CENTURY. (4 cr; prereq 1005 or #)

Interdisciplinary consideration of specialized problems in later 20th-century art, thought, society, with particular attention to critical theory and method.

**Western Survey Courses:
The European Heritage****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-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.

**Western Topics Courses:
The European Heritage****3191. TOPICS: GREEK CIVILIZATION.** (4 cr; prereq 1111 or #)

Interdisciplinary consideration of specialized problems in Greek art, thought, society, with attention to critical theory and method.

3193. TOPICS: ROMAN CIVILIZATION. (4 cr; prereq 1113 or #)

Interdisciplinary consideration of specialized problems in Roman art, thought, society, with attention to critical theory and method.

3195. TOPICS: THE MIDDLE AGES. (4 cr; prereq 1115 or #)

Interdisciplinary consideration of specialized problems in medieval art, thought, society, with attention to critical theory and method.

3197. TOPICS: THE RENAISSANCE AND REFORMATION. (4 cr; prereq 1117 or #)

Interdisciplinary consideration of specialized problems in Renaissance and Reformation art, thought, society, with attention to critical theory and method.

3199. TOPICS: THE BAROQUE. (4 cr; prereq 1119 or #)

Interdisciplinary consideration of specialized problems in baroque art, thought, society, with attention to critical theory and method.

Non-Western Survey Courses**1201. THE HERITAGE OF CHINA: THE EARLY PERIOD.** (4 cr, §Chn 1201)

Chinese culture from beginnings through 10th century: literature (poetry, short stories), philosophy, history, visual arts, and music. Confucianism, Taoism, Buddhism. Primary texts read in translation.

1202. THE HERITAGE OF CHINA: MEDIEVAL TO MODERN. (4 cr, §Chn 1202)

Chinese culture from 11th century to present: literature (poetry, drama, fiction), philosophy, history, visual arts, and music. Western contacts and cultural upheaval. Primary texts read in translation.

1211. THE HERITAGE OF INDIA: ANCIENT INDIAN CIVILIZATION. (4 cr) Lincoln

Ancient Indian social, cultural, economic, and political life. Literature, art, philosophy, religion.

1212. THE HERITAGE OF INDIA: MODERN INDIA. (4 cr)

Contemporary civilization and its development. Social, cultural, economic, and political life. Hindu, Muslim, and Buddhist contributions.

Non-Western Topics Courses**3291. TOPICS: ANCIENT CHINESE CIVILIZATION.** (4 cr; prereq 1202 or #)

Interdisciplinary consideration of specialized problems in ancient Chinese art, thought, society, with attention to critical theory and method.

3292. TOPICS: MEDIEVAL AND MODERN CHINA. (4 cr; prereq 1201 or #)

Interdisciplinary consideration of specialized problems in medieval and modern Chinese art, thought, society, with attention to critical theory and method.

Major Requirements and Course Descriptions

3293. TOPICS: ANCIENT INDIAN CIVILIZATION. (4 cr; prereq 1211 or #)

Interdisciplinary consideration of specialized problems in ancient Indian art, thought, society, with attention to critical theory and method.

3294. TOPICS: MODERN INDIA. (4 cr; prereq 1212 or #)

Interdisciplinary consideration of specialized problems in modern Indian art, thought, society, with attention to critical theory and method.

Methods and Critical Theory

1301. THE LIFE OF THE MIND: INTRODUCTION TO METHODS IN THE HUMANITIES. (4 cr)

Nature of the humanities explored through interpretation of major works from literature, rhetoric, history, philosophy, the visual arts, music, and film. Humanities knowledge and its place in a liberal education.

3321. THEORIES OF CULTURE. (4 cr; prereq jr or sr or #)

Sociological, anthropological, and philosophical models of culture. Critical analyses of the interrelations of art, society, and ideology. Authors may include Marx, Durkheim, Freud, Gramsci, Benjamin, Marcuse, Geertz, Derrida, Foucault.

5301. SOCIETY, IDEOLOGY, AND THE PRODUCTION OF ART. (4 cr; prereq jr or sr or grad) Leppert

Recent critical theories on the relation of the arts to social and ideological forces, consideration of selected artifacts from Western culture (Renaissance to 20th century; high, popular, and mass culture). Music, visual art, literature.

5302. AESTHETICS, IDEOLOGY, VALUATION OF ART. (4 cr; prereq jr or sr or grad) Leppert

Society, ideology, and aesthetic value considered in light of recent critical theories of visual art, music, and literature. Mediations of place, social class, gender, ideology, and aesthetic judgment in post-Renaissance Western culture.

Ideas, Issues, and Themes

3625. SCIENCE AND THE HUMANITIES. (4 cr; prereq jr or sr or #)

Implications for ethics and social design of competing claims made by the sciences and the humanities. Kinds of creativity and methodology of the two fields. Snow, Bronowski, Frye, Bohr, Beckett, Heisenberg, Skinner, E. O. Wilson.

3631, 3632, 3633. COMPARATIVE SOTERIO-MORPHISM. (4 cr per qtr) Tapp

"Saviors" of the past: the insights they afford into the creation, maintenance, and changing of humankind's values. Traditions surrounding them as literary and philosophical imagination, as art history, and as mirrors of psychosocial structures. 3631: Krishna through the ages. 3632: Buddha through the ages. 3633: Jesus through the ages.

3643. THE WEST AND THE WORLD: LITERARY PERSPECTIVES. (4 cr; prereq jr or sr or #) Hutters

Novels concerned with collision between the West and non-Western cultures. Authors such as Melville, Conrad, Forster, Orwell, Achebe, Mao Dun, Tanizaki, V. S. Naipaul.

3655. THE CONCEPT OF CLASSICISM. (4 cr; prereq jr or sr or #)

Changing views of classicism in Europe from 17th century to present, studied through literary texts, aesthetic criticism, music, art, and architecture.

3663. IDEAS OF NATURE: ENGLAND AND AMERICA TO 1875. (4 cr; prereq jr or sr or #)

Nature in Anglo-American culture. Seventeenth-century ordered universal hierarchy and Puritan "garden in the wilderness," aesthetics of the sublime and picturesque, 19th-century romanticism and transcendentalism. Shaftesbury, Wordsworth, Emerson, Thoreau, Hawthorne, Muir; clerics, philosophers, aestheticians, painters, poets, novelists, explorers.

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 #) Klinger

Quest for meaning and process of individuation.

Genres

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.

3737. THE FAMILY IN THE NOVEL, EAST AND WEST. (4 cr)

Cross-cultural study of novels in which family relationships over generations serve as subject matter, theme, and structure. Such authors as Böll, Butler, Faulkner, Lawrence, Mann, Marquez, Murasaki, V. S. Naipaul, Pa Chin, Stegner, Tanizaki, Ts'ao Hsueh-ch'in, Turgenev, Woiwode.

3738. THE POLITICAL NOVEL. (4 cr; prereq jr or sr or #)

Selected novels from Stendhal to present with emphasis on critical study of works by major authors. Theories of human nature, relation of individual and society, philosophy of history and political action, experience and ideology, the political novel as a genre.

3755. CINEMA AND IDEOLOGY. (4 cr, §CLit 3215) Mowitz

Major aspects of film as discourse with attention to its complex relations with the ideological and political contexts in which it appears. Specific films used to study cinema as institution, film as current product, and artistic ideologies in politics.

5711. INTERPRETATION OF MYTH. (4 cr, §RelS 5111; prereq jr or sr or #) Lincoln
Structure and function of myths. Myth as social character, ideological system, and literary form. Readings in classic theories of myth and primary sources from India, Iran, Mesopotamia, Greece, Africa, North and South America.

5756. ART AND IDEOLOGY: LIVING CINEMA. (4 cr, §CLit 5243) Bensaïma
Principal aesthetic and ideological characteristics of *Direct-Cinema*, the impact it has had on the contemporary development of cinema of fiction, and the role it has played in the evolution of different forms of documentary and political cinema.

People, Times, Places, and Major Works

3813. MEDIEVAL RUSSIAN CULTURE: THE LIFE-STYLES OF OLD RUSSIA. (4 cr; prereq jr or sr or #) Noonan
Literary, artistic, and material culture of the peoples of European Russia from early medieval era to late 17th century.

3871. REVOLUTIONS IN SCIENCE AND THE ARTS: 1900-1931. (4 cr; prereq jr or sr or #) Klinger
Tradition and revolutionary change in science, literature, art, music, and philosophy in Europe. The heritage of symbolism; philosophies of process; implications of relativity, quantum mechanics, Goedel's theorem; cubism, futurism, constructivism, expressionism, dadaism, surrealism; atonality, twelve-tone and neoclassical music.

3878. THE MODERN GREEK EXPERIENCE. (4 cr) Stavrou
Modern Greek literary and cultural contributions as symbols of national frustrations, aspirations, and accomplishments.

5831. INDO-EUROPEAN CIVILIZATIONS. (4 cr; prereq jr or sr or #) Lincoln
Common origins of Celtic, Germanic, Greek, Roman, and Indo-Iranian cultures. Myth, religion, poetry, philosophy within context of social, political, economic life. Emphasis on epic literature, priestly ideology, and comparative method in linguistics, archaeology, and study of myth.

5832. PRE-CHRISTIAN EUROPE: GERMANS AND CELTS. (4 cr; prereq jr or sr or #) Lincoln
Two major European civilizations in antiquity. Literary forms (epic, saga, poetry), art, and religion, along with their social, political, and economic background. Primary sources include *Beowulf*, *Njal's Saga*, Tacitus' *Germania*, and the *Tain Bo Cualnge* ("Cattle Raid of Cooley").

5833. INDIA'S GODS AND GODDESSES. (4 cr; prereq 1211 or RelS 1031 or SoAs 1504 or equiv, jr, 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.

Directed and Special Studies

3910. TOPICS IN THE HUMANITIES. (4 cr per qtr; prereq jr or sr or #)
Topics specified in the *Class Schedule*.

3910H. HONORS COURSE: TOPICS IN THE HUMANITIES. (4 cr per qtr; prereq jr or sr or #)
Topics specified in the *Class Schedule*.

3944. HONORS THESIS. (4 cr; prereq sr, candidate for magna or summa honors in humanities, Δ)

3970. DIRECTED STUDIES. (Cr ar; prereq #)
Guided individual reading or study.

3970H. DIRECTED STUDIES: HONORS. (Cr ar; prereq #)
Independent study program to permit students to pursue interests in special reading and/or study.

3980. DIRECTED INSTRUCTION. (1-3 cr per qtr; prereq completion for cr of course to be taught)

5910. TOPICS IN THE HUMANITIES. (4 cr; prereq jr or sr or grad student)
Topics specified in the *Class Schedule*.

5910H. TOPICS IN HUMANITIES: HONORS. (4 cr; prereq jr, sr, grad, #)
Topics in the Humanities (specific titles to be listed in the *Class Schedule*).

5930. HUMANITIES PROSEMINAR. (3 cr per qtr; prereq sr)
Review of humanities materials: arts, sciences, and civilization.

5930H. HONORS COURSE: HUMANITIES PROSEMINAR. (3 cr per qtr; for honors candidates in humanities and others with overall grade avg of B or better; prereq sr, #)
For description, see 5930.

5970. DIRECTED STUDIES. (Cr ar; prereq jr or sr or grad student, #)
For description, see 3970.

5970H. DIRECTED STUDIES: HONORS. (Cr ar; prereq jr, sr, grad, #)
Independent study program to permit students to pursue interests in special readings and/or study.

5990. SENIOR WORKSHOP. (4 cr; prereq sr major...or jr major with Δ)
Faculty and student analysis of cultural artifacts.

Individualized Studies Degree Program (B.I.S.)

Staff—*Advisers*, 220 Johnston Hall (624-8006)

The bachelor of individualized studies 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. Course work may be interdepartmental in composition and may include up to 40 credits from outside of CLA.

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. In the application you must explain why your academic needs would best be met by an individualized program and must list the courses you propose to include in your program. If you are accepted, you will be referred to two or more faculty advisers for 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 Requirements

85 cr, including 75 at the 3xxx and 5xxx levels, approved for the degree program. These credits must be divided into three or four areas of study, which may be departmental or interdepartmental in composition, with a minimum of 16 credits at the 3xxx- or 5xxx-level in each area. Up to 40 of the credits may be from outside CLA.

Students must demonstrate proficiency in a second language equal to the college's entrance standard for a second language.

A minimum of 75 credits must be completed at the University while enrolled in the B.I.S. program.

A maximum of 20 credits of directed studies (3970 or 5970) and a maximum of 16 credits completed on S-N grading may be included in a B.I.S. program.

Only two courses in which a D grade was earned may be included in the 85 credit program, and these courses must have been taken prior to admission to the B.I.S.

The 85 cr must include at least one course in which a substantial piece of analytic writing is required.

The CLA requirement of 30 3xxx and 5xxx credits outside the major does not apply. Distribution requirements for the B.I.S. degree are detailed in the first section of this bulletin.

Individually Designed Interdepartmental Major (IDIM)

Staff—*Advisers*, 220 Johnston Hall (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 course work focused on a theme of their own choosing, completed in consultation with faculty and staff advisers. IDIM students must complete all requirements for the B.A. degree.

Admission to the IDIM program is based on acceptance by faculty and staff advisers of your program proposal; the proposal must explain your academic goals and outline a set of courses (which may include directed studies and internships) appropriate to these goals. IDIM programs involve course work from three or four areas, which may be departmental or interdepartmental in composition.

Thematic unity is a basic requirement of the IDIM program. Typical themes have been law and society, environmental studies, film studies, communications, aspects of aging, and medieval studies.

B.A. Major Sequence

Major Requirements—80 cr approved for the major program, distributed in three or four areas of at least 16 credits each, including at least 60 cr 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 credits in the major must be completed after the program has been approved.

No more than 20 credits of directed study (3970 or 5970) may be applied to the major. No course in which a grade of D has been earned may be applied to the major.

The CLA requirement of 30 3xxx-5xxx credits 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, the 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 at OSLO.

3970. DIRECTED STUDIES. (1-15 cr per qtr; pre-req 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.

3251w-3252s. METRO INTERN SEMINAR. (3/2 cr; prereq #)

3251: Developing an understanding of social ethics, especially of the corporation's role in society. 3252: Specific issues facing society in which corporations are involved.

5402-5403w. ECOLOGY, TECHNOLOGY, AND SOCIETY. (4 cr per qtr)

5402: Growth of technological systems and their impact on society, values, and nature. Features of problems in transition to a sustainable society. Energy alternatives. Emerging life-support technologies and associated values. 5403: Military technology related to problems of life support, major dilemmas of economic growth and control of technology, ethical problems faced by engineers, factors in transition to a sustainable society.

International Relations (IntR)

Staff—*Director of International Relations Program*, Barbara Knudson, *Director of Honors*, Brian Job, 214 Social Sciences Building; *Undergraduate Advisers*, 248 Social Sciences Building (624-9353)

Adjunct Faculty—J. Adams (Geography), R. Adams (Geography), Asher (South and Southwest Asian Studies), Berkowitz (Political Science), Brauer (History), Browne (Speech-Communication), Carter (Journalism and Mass Communication), Coen (Economics), Cooperman (Sociology), Duvall (Political Science), Ellenbogen (Sociology), Farmer (History), Freeman (Political Science), Fulton (Sociology), Gudeman (Anthropology), Ingham (Anthropology), Isaacman (History), Job (Political Science), Kac (Linguistics), Kennedy (Sociology), Kieft (History), Knudson (Institute of International Studies), Kopf (History), Kudrle (Public Affairs), Kvavik (Political Science), Lee (Journalism and Mass Communication), Marshall (History), Martin (Urban Studies), McCaa (History), Mestenhauser (International Student Adviser's Office), Metcalf (History), Miller (Anthropology), Munholland (History), Nimtzer (Political Science), Pitt (Economics), Porter (Geography), Rice (Geography), Rosenzweig (Economics), Rowe (Anthropology), Sampson (Political Science), Sartorius (Philosophy), Schwartz (Latin American Studies), Schwartzberg

Major Requirements and Course Descriptions

(Geography), Scott (Geography), Seltzer (Home Economics), Shively (Political Science), Spector (Women's Studies), Stavrou (History), Vidal (Spanish and Portuguese)

International relations is concerned with human activities that connect and cross boundaries between nations and cultural areas.

This program is based on the belief that the field of international relations constitutes a distinct area of study and analysis within which methods developed by many academic disciplines can be usefully applied. While emphasis on some aspects of the field is possible within various academic disciplines, this multidisciplinary program is intended to serve students who desire a more comprehensive view of the subject.

Students choose one of eight curriculum options, or "tracks," in completing the International Relations major requirements: Diplomacy and Interstate Relations; International Development; International Commerce; International Intercultural Communication; International Peace, Conflict, and Security; International Relations/Asia; International Relations/Eastern Europe-U.S.S.R.; and International Relations/Western Europe. Each track includes a core of required courses from different disciplines, plus electives to satisfy individual interests and objectives. All majors are required to take IntR 3101, Theoretical Approaches to International Relations, and at least one upper division social science quantitative methods course.

Students are also required to demonstrate proficiency in a foreign language. If you lack such proficiency you must complete specified 3xxx-level course work in one modern foreign language. This will entail taking anywhere from eight to fifteen 3xxx-level credits, depending on the language chosen. The brochure "Programs in International Relations," gives specific credit and course requirements.

Because requirements are diverse, an early start in planning the major program is essential. You are urged to complete preparatory work, including the second

language requirement and CLA group distribution requirements, during your freshman and sophomore years. For early help in planning an international relations major, visit the undergraduate advisers in 248 Social Sciences Building.

The booklet *Programs in International Relations*, detailing requirements, may be obtained from the Institute of International Studies, 246 Social Sciences Building, University of Minnesota, 267 19th Avenue South, Minneapolis, MN 55455.

B.A. Major Sequence

Required Preparatory Courses—

Specific prerequisite course work varies according to the track chosen (see International Relations Program brochure). To be accepted into the major, all students must present the following: approximately 20 credit in relevant preparation course work including Econ 1001-1002 and 12 credits from such courses as Anth 1102, Pol 1025 or 1026, western European history (or history courses more appropriate to particular tracks); at least three quarters of second language study (or equivalent, taking into account high school preparation); prerequisites necessary for a social science research methods course (see program brochure). All the above courses must be completed with grades of C or better.

Applicants for the International Commerce track must complete, in addition, Accounting 1024-5, with C or better, and must present a grade point average on their total record that is the same as that currently required for admission to the School of Management.

Students who declare International Relations as their major objective will be classified as "pre-IntR" until the above prerequisites are met and the major program form is signed by a program adviser.

Major Requirements—48-56 3xxx-5xxx cr to include 3101 and a 3xxx- or 5xxx-level quantitative methods course in social science. Eight-15 3xxx-5xxx cr in a foreign language. Remaining requirements vary from track to track. Consult *Programs in International Relations* for

the detailed requirements of each track. None of the 3xxx- or 5xxx- level credits applied toward the major may be taken S-N except Speech 5452 (only offered S-N). Only one course completed with a grade of D is accepted in the major.

When declaring an International Relations major, it is necessary to consult with an undergraduate adviser to establish an approved major program.

Minor Sequence

Minor Requirements—*International Relations*: 24 cr including 3101 and five courses from at least three of the following four fields—international economics, international politics, diplomatic history, international communication; 5900, 5910, or 5930 may be substituted as one of the five courses.

There is no foreign language requirement beyond that required by CLA.

The selection of courses must be approved by an undergraduate adviser or by the director of the program to ensure a coherent minor program and sufficient interdisciplinary breadth.

Foreign Studies: Students are encouraged to take advantage of opportunities for study abroad as a means of rounding out their study of international relations. Information about study abroad and the foreign studies minor can be obtained from the foreign studies coordinator in 260 Social Sciences (624-4808).

The courses described below are only a partial listing of those available in the program. A complete listing of courses offered by participating departments is published in the *Programs in International Relations* booklet.

3101f. THEORETICAL APPROACHES TO INTERNATIONAL RELATIONS. (4 cr; prereq international relations major or #) Job
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 #)

3105. NUCLEAR WEAPONS AND NUCLEAR WAR. (4 cr)

Development of nuclear weapons; policies and doctrines of deployment and use of nuclear weapons; social, economic, political costs of the arms race and use of nuclear weapons; efforts to control the arms race and reduce the threat of nuclear war.

3900. TOPICS IN INTERNATIONAL RELATIONS. (1-4 cr; prereq 12 cr in social science)

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 towards the major]; 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.

3991Hf, w.s. HONORS COURSE: SUPERVISED RESEARCH PAPER. (3 cr; prereq sr honors candidate in international relations, Δ)

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

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.

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.

5831s. ANALYSIS OF WORLD FUTURES MODELS. (4 cr, §IEOR 5445; prereq #) Starr

Issues surrounding continued growth and consumption of global resources; use of quantitative models to describe and analyze socio-economic systems; development of world future model; student projects to develop alternative models; limitations of the quantitative approach.

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.

Major Requirements and Course Descriptions

5920. TOPICS IN INTERNATIONAL DECISION MAKING. (1-4 cr; prereq Δ)

Proseminar. Synthesis of approaches to international relations through student participation in decision-making roles in experimental, simulated situations. 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.

Islam

See South and Southwest Asian Studies.

Italian

See French and Italian.

Japanese

See East Asian Studies.

Jewish Studies

See Ancient Near Eastern and Jewish Studies.

Journalism and Mass Communication (Jour)

Staff—*Director*, MaryAnn Yodelis Smith, 112 Murphy Hall; *Director of Undergraduate Studies*, (to be announced)

Professors: Brovald, Carter, Fang, Gillmor, Tichenor, Wackman

Associate Professors: Dicken-Garcia, Glasser, Lee, Ward

Assistant Professors: Busterna, Craig, Hansen, Roberts, Schwartz

Study in the School of Journalism and Mass Communication is concerned with the theories and practices of mass communication, historical and contemporary, and, for those who choose, the development of skills and techniques necessary for the successful practice of written, oral, and visual communication.

The school offers two B.A. programs. One, the professional program, prepares students for a variety of careers in journalism, including media management, news-editorial, advertising, visual communication, broadcast journalism, and public relations work. This program is based on broad liberal education studies,

knowledge of the social and professional responsibilities of the communicator, and beginning competence in journalistic skills. About three-fourths of the course work is completed in the social sciences, the humanities, and other areas of liberal arts, and the remainder is completed in journalism courses, many of which also have a liberal arts emphasis.

The second B.A. program is in mass communication. A minor in mass communication is available also. Beyond a core of course work in common with the professional program, mass communication program students are encouraged to take a wide variety of course work dealing with the economic, political, legal, and social aspects of mass communication.

General Education—Journalism preparatory courses 1001, 1002, and 3201 are open to nonmajors with or without minimal prerequisites. The enrichment courses (Group II) also are open to nonmajors.

B.A. Major Sequence—Professional Program

Admission—The school admits a limited number of undergraduate professional program students annually. A formal intention to major in journalism should be filed in the Undergraduate Studies Office, 18c Murphy Hall, before enrolling in 1003. You should apply for formal admission to the professional program after you have completed preparatory courses 1001, 1002, and 1003, have completed three of the supporting courses on an A-F grading basis, have taken the College Entrance Examination Board English composition test, and have passed a typing test administered by the school. Admission to major status is granted pending a grade of C or better in 1004, which should be taken in the quarter that you apply. Journalism courses at the 3xxx- and 5xxx-level should not be taken prior to application. Obtain complete information about application from the Undergraduate Studies Office.

Specialized Professional Program—A specialized program may be planned in consultation with an adviser. Examples

are public affairs journalism, international communication, community newspaper management, graphic arts, communications research, newspaper design, public relations, broadcast advertising, magazine editing, and urban reporting.

Supporting Course Work—Econ 1001-1002; Pol 1001; Hist 1301-1302 or 3821-3822 or 3822-3823; for students whose primary interest area is advertising, public relations or management, Psy 1001; for students whose primary interest area is broadcast journalism, public relations, or management, Spch 1101.

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—1001, 1002, 1003, 1004

Major Requirements—One course from Group I-A; one course from Group I-C; four courses from Group II, one of which must be 3007 or 3008; 3 additional courses from Groups I, II, and III. The B.A. program consists of 48 journalism credits.

Major project: All journalism majors are required to complete a major project prior to graduation. For details about project options, contact the Undergraduate Studies Office of the school.

B.A. Major Sequence— Mass Communication Program

Admission—Application for admission to the mass communication program is not required, but a plan of study must be completed in consultation with the coordinator of advising once 1001, 1002 and 1003 are completed with a 2.50 grade point average across the three courses. These courses and 1004, with a grade of C or better, must be completed before major requirements are undertaken.

Supporting Course Work—Completion of freshman composition requirement (or, if exempted, one 1xxx- or 3xxx-level composition course).

No other specific courses are required, but students should consult with the coordinator of advising about appropriate recommended courses.

Required Preparatory Courses—1001, 1002, 1003, 1004

Major Requirements—A minimum of seven courses from Groups II and III, one of which must be 3007 or 3008 (3201 may be counted as one of these seven courses); a 3xxx- or 5xxx-level composition course, selected from a list of courses approved by the school. The B.A. program consists of 40 journalism credits.

Major project: All journalism majors are required to complete a major project prior to graduation. For details about project options, contact the Undergraduate Studies Office of the school.

Minor Sequence— Mass Communication

Admission—Application for admission to the minor is not required, but a plan of study must be completed in consultation with the Undergraduate Studies Office once 1001 is completed and before upper-level requirements are undertaken.

Supporting Course Work—Completion of freshman composition requirement (or exemption) and two additional composition courses chosen from a list of courses certified by the school, one of which must be taken at the 3xxx level.

Required Preparatory Course—1001; 1002 also recommended

Minor Requirements—A minimum of seven courses from Groups II and III, one of which must be 3007 or 3008 (1002 and 3201 may be counted among these seven courses).

Preparatory

1001. INTRODUCTION TO MASS COMMUNICATION. (2 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.

Major Requirements and Course Descriptions

1002. VISUAL COMMUNICATION. (2 cr)

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.

1003. PRODUCING MASS MEDIA MESSAGES.

(4 cr; prereq formal pre-journalism professional or pre mass communication status, 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.

1004. INFORMATION FOR MASS COMMUNICATION. (4 cr; prereq 1003, 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, data bases, and interviews.

I. Professional

These courses, with the exception of 3201, are not open to students in mass communication. Professional journalism students must have official major status and have completed 1004 before enrolling.

Group A

3101. REPORTING. (4 cr; prereq professional major status, grad students must pass 30 wpm typing test, Δ)

Fact gathering and journalistic writing. Problems in judgment and handling of news and news features.

3201. PRINCIPLES OF ADVERTISING. (4 cr; no prereq for non-journalism majors...prereq major status for professional journalism and mass communication students...1001 and study plan filed for mass communication minors)

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 professional major status, 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 3101, grad students must pass 30 wpm typing test, Δ)

Reporting and editing news of courts and municipal, county, state, and federal administrative and legislative agencies.

3155. PUBLICATIONS EDITING. (4 cr; prereq 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 (formerly 5549). PUBLIC RELATIONS. (4 cr; prereq 16 cr in social science depts, Δ)

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 3101, Δ)

Writing feature articles for general, class, and trade publications; study of market free-lance methods.

3176. BUSINESS AND INDUSTRIAL JOURNALISM. (4 cr; prereq 3155, 3173 or 3121, #, Δ)

Analysis of content, staffing, design, and production of business and company publications. On-the-job projects of gathering material and writing feature articles for the business and company press.

3193. COMMUNITY NEWSPAPER. (4 cr; prereq professional major status, #, 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 professional major status, 3201 or #, Δ)

Advertising appeals and strategy; advertising for print and broadcast. Individual and group projects.

3321. BASIC MEDIA GRAPHICS. (4 cr; prereq professional journalism major status, #, 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 3101, Δ; 2 lect, 3 lab, 3 news production hrs per wk)

Writing, interviewing, delivery, audiotape editing, graphics preparation. Production of radio newscasts and a radio documentary.

5182. SUPERVISION OF SCHOOL PUBLICATIONS. (4 cr; prereq professional journalism major status or #, Δ)

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 3121 or 3173 or 5144 or 5155, Δ)

Advanced problems in reporting about government, politics, social problems, and the arts.

5133. INTERPRETIVE REPORTING ABOUT SCIENCE. (4 cr; prereq 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 one 3xxx writing course, major or grad status for professional journalism students with #, Δ)

Oral and written analysis of major political, economic, social developments. Persuasive communication in newspapers and magazines; columnists; commentators.

5143. INTERPRETATION OF SCIENCE AND TECHNOLOGY. (4 cr; prereq professional major status, 5133 or #, Δ)

Analysis of scientific research and technological development for mass and specialized media; critical study of science content in media; audience impact.

5155. ADVANCED REPORTING METHODS. (4 cr; prereq professional major status, 3101 or grad or professional experience with #, 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 (formerly 5559). CASE STUDIES IN PUBLIC RELATIONS. (4 cr; prereq professional major status or #, 3159, Δ)

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.

5171. ARTS REVIEWING. (4 cr; prereq one 3xxx writing course, major or grad status for professional journalism students, #, Δ; offered alt yrs)

Book, theatre, visual media reviews. Analysis of leading critics and critical periodicals. Weekly reviews.

5174. MAGAZINE EDITING AND PRODUCTION. (4 cr; prereq 3173 or 5302 or 5322, #, Δ)

Writing, editing, illustration, design, layout, photo-composition of a single-issue magazine.

5233. GRAPHIC DESIGN ANALYSIS. (4 cr; prereq professional major status, 3321 or #, Δ)

Publication formats for design and efficiency; historical and current trends; field projects; creative problems.

5261. ADVERTISING; MEDIA ANALYSIS. (4 cr; prereq professional major status, 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 AND MEDIA STRATEGY. (4 cr; prereq professional journalism major status, 5261, Mktg 3000 or #, Δ)

Relation of campaign strategy to media measurement, evaluation, and planning. Coordination of advertising campaigns; media scheduling and purchasing.

5272. ADVANCED ADVERTISING COPYWRITING. (4 cr; prereq 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 3301, Δ)

Codes in photographic communication. Producing photographs for publication contexts. Color theory. Examination of important photographers. Film and processing expenses.

5303. PROJECTS IN PHOTOGRAPHIC COMMUNICATION. (4 cr; prereq 5302, Δ)

Advanced projects in documentary photography; structuring visual narratives. Comparison of exhibition/publication formats. History, ideology approaches to documentary photography. Film and processing expenses.

5322. NEWSPAPER DESIGN. (4 cr; prereq 3321, Δ)

Elements of newspaper design, historical survey of newspaper make-up, use of typography, photography, hand art to create visual and verbal communication, legibility studies, experimental formats.

5441. ELECTRONIC NEWSGATHERING. (4 cr; prereq 3451 or 5302, Δ)

Theory and practice of effective communication with video as applied to broadcast journalism. Lectures, demonstrations, and exercises in planning, lighting, shooting, editing, and scripting typical broadcast news assignments. Analysis of theory and research on social impact of electronic journalism.

5442. ADVANCED TELEVISION NEWS. (4 cr; prereq 3451, Δ; 2 lect, 3 lab, 3 news production hrs per wk)

Newsfilm editing; preparation and delivery of television newscasts. Current problems; legal and ethical considerations.

5444. TELEVISION AND RADIO DOCUMENTARY. (4 cr; prereq 3451 or 5302 or 5174, Δ; 2 lect hrs, field and lab hrs as needed)

Scope and techniques. Production of television or radio news documentaries of broadcast quality.

II. Enrichment

Non-journalism students meeting the prerequisites may enroll in these courses. Mass communication majors may enroll in these courses if they have approved status. Professional journalism students must have official major status before enrolling. Mass communication minors may enroll in these courses after filing a study plan.

Major Requirements and Course Descriptions

3007. THE MEDIA IN AMERICAN HISTORY

AND LAW: CASE STUDIES. (4 cr; prereq Δ ...1001 for non-journalism majors. . . approved status for professional and mass communication majors. . . filed study plan for mass communication minors)
Using a case study approach focusing on legal and ethical issues, examines the media in the socio-economic-political-technological context of a specific historical period.

3008. MASS COMMUNICATION PROCESSES AND STRUCTURE. (4 cr; prereq same as 3007)

Analysis of a variety of communication theories as they relate to mass communication processes; major structural aspects of mass communication systems as they influence mass communication processes.

3776. MASS COMMUNICATION LAW. (4 cr)

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, §Pol 3796; prereq major status for journalism students, 1001 or Pol 1001 or #)

Analysis of role of mass media in politics; emphasis on television and electoral campaigns; news coverage versus newsmaking. Free press in democracy.

5221. PUBLICATION GRAPHICS. (4 cr; prereq 8 cr in 3xxx or 5xxx courses in art and design or #)

Role of printing processes in graphic communication. Technique and production of illustrations. Significant developments in graphic arts technology.

5251. PSYCHOLOGY OF ADVERTISING. (4 cr, §Psy 5751; prereq Psy 1001)

Psychological principles, research techniques, and applications in advertising and selling. Consumer attitudes and behavior. Psychological mechanisms upon which effectiveness of advertisements and commercials depends.

5274. SOCIAL, ECONOMIC, AND REGULATORY ASPECTS OF ADVERTISING. (4 cr; prereq sr or grad status, 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)

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 16 cr in social science depts)

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 5501 or Soc 5355)

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.

5601. HISTORY OF JOURNALISM. (4 cr)

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 #, Δ ; offered alt yrs)

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)

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.

5614. HISTORY OF MASS COMMUNICATION TECHNOLOGY. (4 cr)

History of the instruments of mass communication. How they work. Their impact on our lives.

5615. HISTORY OF VISUAL COMMUNICATION IN THE MASS MEDIA. (4 cr)

Social history of photography, film, and video. Informational, documentary, and entertainment functions of visual communications. Organizational structures, visual styles, and audiences.

5721. MASS MEDIA IN A DYNAMIC SOCIETY. (4 cr; prereq 16 cr in social science depts)

Economic, political, and social determinants of character and content of mass communications in America. Impact, structure, functioning of mass media. Problems, prospects, and criticism. Professionalism, technology, reform.

5725. THE MANAGEMENT OF MEDIA ORGANIZATIONS. (4 cr; prereq 16 cr in social sciences)

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 16 cr in social sciences, #, Δ ...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.

5731. CURRENT COMMUNICATIONS PROBLEMS. (4 cr; prereq professional or mass communication sr, 16 cr in social science depts, #, Δ)
Individual projects and seminar method of analysis of major contemporary problems of communication, both descriptive and normative.

5731H. HONORS COURSE: CURRENT COMMUNICATIONS PROBLEMS. (4 cr; prereq professional or mass communication sr, 16 cr in social science depts, #, Δ)
For description, see 5731.

5777. CONTEMPORARY PROBLEMS IN FREEDOM OF SPEECH AND PRESS. (4 cr; prereq 16 cr in social science depts)
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 16 cr in social science depts)
Global telecommunications, channels, artifacts of international mass communication. Problems in free flow of information. Roles of international organizations, journalism. Mass communication in social, political, educational, economic development; implications for conflict resolution.

5825. WORLD COMMUNICATION SYSTEMS. (4 cr; prereq 16 cr in social science depts)
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.

5826. MASS COMMUNICATION SYSTEMS OF WESTERN EUROPE. (4 cr; prereq 16 cr in social science depts)
Implications of mass media and telecommunications with analysis of historical origins, contemporary sociocultural issues, and roles of mass communication in Western European and international affairs.

III. Independent Study

3970. DIRECTED STUDIES. (1-4 cr per qtr; prereq major status for professional and mass communication students, #, Δ)
Guided individual reading or study.

5970. ADVANCED PROJECTS IN JOURNALISM. (1-4 cr per qtr [8 cr max]; prereq major status for professional journalism and mass communication students, B avg, #, Δ)

5970H. HONORS COURSE: ADVANCED PROJECTS IN JOURNALISM. (1-4 cr per qtr [8 cr max]; prereq major status for professional and mass communication students, B avg, #, Δ)

5990. SPECIAL TOPICS IN MASS COMMUNICATION. (4 cr per qtr [8 cr max]; prereq major status for professional and mass communication students, #, Δ)
Topics specified in *Class Schedule*.

Latin

See Classics.

Latin American Studies (LAS)

Staff—Chair, Stuart Schwartz, 727 Social Sciences Building; *Administrative Assistant,* Helen McNulty, 232 Social Sciences Building

Adjunct Faculty—Professors: Barrett (Geography), Brauer (History), Carter (Journalism), Ellenbogen (Sociology), Gudeman (Anthropology), Gregersen (Forest Resources), Kudrle (Humphrey Institute), Miller (Anthropology), Raup (Agricultural and Applied Economics), Schwartz (History), Sousa (Portuguese), Southall (Afro-American Studies), Vidal (Spanish)

Associate Professors: Barnwell (Ecology and Behavioral Biology), Hendricks (Anthropology), Ingham (Anthropology), Jara (Spanish), McCaa (History), Menanteau (Sociology), Phillips (History), Rodriguez (Spanish)

Assistant Professors: Costa-Lima (Spanish and Portuguese), Hastorf (Anthropology), Plummer (Afro-American Studies), Valdes (Chicano Studies), Weil (Geography), Wiemers (Wilson Library)

This program, through a multidisciplinary combination of area and language course work, is designed to prepare specialists in aspects of Latin American studies and activities. 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

Major Requirements and Course Descriptions

pursue it by designing a relevant cluster of courses. A list of approved Latin American courses and a list of approved related courses are available in the adviser's office, 232 Social Science Building.

Field experience in Latin America is encouraged, and credit for it may be arranged (see Foreign Study). Students are urged to take advantage of University opportunities for cross-cultural experience prior to foreign study.

Transfer credit, credit for directed research in non-LAS courses, or credit for other courses not on the approved lists may be applied to the major or minor when appropriate. 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.

B.A. Major Sequence

Required Preparatory Courses—3131; completion of Span 1105 or Port 1105 (use of proficiency exams encouraged); Hist 1401 or 3401, 1402 or 3402, 1403 or 3403 (preferably in sequence)

Major Requirements—16 cr in Latin American courses from three or more social science departments other than history

8 cr of Latin American humanities other than history

Additional cr in approved courses to bring total to 48

4 cr of 5120 (may be included among required social science or humanities courses)

Additional cr from approved lists of courses to bring total to 48, no more than 12 cr of which can be from list of related courses

If you have completed Span 1105, you may not count toward the major Spanish literature courses offered in translation or more than 8 credits of Portuguese literature courses offered in translation. If you have completed Port 1105, you may not count toward the major Portuguese literature courses offered in translation or more

than 8 credits of Spanish literature courses offered in translation.

Up to 10 credits may be taken S-N; up to 15, with adviser approval, in independent study or directed research.

Minor Sequence

Required Preparatory Course—3131; completion of Span 1105 or Port 1105 (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 or Port 1105.

Minor Requirements—24 cr in Latin American or related courses distributed as follows:

4 cr of Latin American history

4 cr of Latin American humanities other than history

8 cr of Latin America courses from two social science departments other than history

4 additional cr of Latin American course work in history or a social science department

Additional cr from approved lists of courses to bring total to 24, no more than 9 of which can be in your major.

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.

5101w. METHODS AND SOURCES FOR LATIN AMERICAN STUDIES. (4 cr per qtr; prereq jr or sr or grad student, reading knowledge of Spanish or Portuguese or #)

Research sources, particularly bibliographic; reference materials and principal works. Prepares students for discipline-centered and interdisciplinary research.

5120a. 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.

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

Guided individual reading or study.

Learning and Academic Skills

Department of Psychology

LASK 1001. BECOMING A MASTER STUDENT.

(2 cr; may not be applied toward any CLA major)
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 (Ling)

Staff—Chair, Larry G. Hutchinson, 142 Klaeber Court; **Director of Undergraduate Studies**, Rocky Miranda, 136 Klaeber Court; **Director, Minnesota English Center**, Mark Landa, 114 Klaeber Court

Professors: Robinett, Sanders

Associate Professors: Downing, Gundel, Houlihan, Hutchinson, Kac, Miranda, Sheldon, Tarone

Assistant Professors: Stemberger, Stenson

Linguistics is the science of human language and the principles governing its structure, acquisition, use, and change.

General Education—Courses that may be of interest to nonmajors include 1001, 1005, 3001, 3005, 3111, 3301, 3811, 5002, 5003, 5101, 5301, 5503, 5601, 5701, 5821.

B.A. Major Sequence

Major Requirements—3001 or 5001, 3301 or 5301, 3601 or 5601, 5201, 5302

12 additional cr in 3xxx or 5xxx linguistics courses (no more than 8 in one area, such as phonology or syntax); related courses in other departments may be applied to the major with the approval of the director of undergraduate studies

Three yrs college study in one foreign language, or two yrs in one and one in a second (requirement may be satisfied by examination); 3 cr in history and/or structure of one language studied

At least seven of the linguistics courses counted toward the major must be taken A-F.

Minor Sequence

Minor Requirements—Four courses, including 3001 and two of the following: 3301, 3601, 5201

The minor program must be approved by the director of undergraduate studies.

1001. THE NATURE OF HUMAN LANGUAGE. (4 cr; may not be used as prereq for advanced courses in linguistics)

Facts and theories concerning human language and their relevance to the study of human behavior.

1001H. HONORS COURSE: THE NATURE OF THE HUMAN LANGUAGE. (4 cr; prereq honors registration)

See description for 1001.

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, \$3005, \$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, \$3005, \$5001; prereq honors regis or #)

For description, see 3001.

3051-3052. HONORS COURSE: LINGUISTICS.

(4 cr per qtr; prereq candidacy for honors in linguistics or #)

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 3301 or #)

Physiology and acoustics of speech sounds; practice in production and perception.

3601. INTRODUCTION TO HISTORICAL LINGUISTICS. (4 cr, \$5601; prereq 3001 or #)

Processes of language change in phonology, syntax, and semantics; linguistic reconstruction; origin of language; language families; development of writing.

3711. TECHNIQUES FOR LANGUAGE SELF-INSTRUCTION. (4 cr)

Linguistic principles and techniques for acquiring command of a second language through individual study; concurrent study of a language through self-instruction.

Major Requirements and Course Descriptions

3811. LANGUAGE LOYALTY AND BILINGUALISM IN MINNESOTA. (4 cr; 1001 or 3001 recommended...knowledge of a second language helpful)

Linguistic ecology; maintenance and loss of immigrant and native languages in America; linguistic borrowing; foreign accents; types of bilingual behavior; research strategies; student research on bilingual communities in the Twin Cities and surrounding areas.

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq linguistics major, #)
Guided individual reading or study.

3971. SENIOR PROJECT. (1 cr; prereq #)

5001. INTRODUCTION TO LINGUISTICS. (5 cr, \$3001, \$3005; prereq grad or #)
For description, see 3001.

5002. LINGUISTIC ANALYSIS. (4 cr, \$5201, \$5302; especially recommended for nonmajors; prereq 3001 or 5001 or #)

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; not open to linguistics majors; prereq 5001 or 45001 or #)

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.

5011-5012-5013. MATHEMATICAL LINGUISTICS. (4 cr per qtr; prereq linguistics major or #)

The propositional and first-order predicate calculi; nonclassical 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.

5206f. 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 intention 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 45001 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:** The standard theory of generative phonology; comparison with alternative theories.

5304. ADVANCED PHONOLOGY. (4 cr; prereq 5201, 5303 or #)

The nature of phonological argumentation; validation and comparison of theories, models, and analyses.

5401-5402. COMPUTATIONAL LINGUISTICS.

(4 cr per qtr; prereq 3001 or 5001 or CSci 3107 or 5101 or # for 5401...3001 or 5001 and knowledge of LISP or Prolog or # for 5402)

5401: Methods and issues in computer processing of natural language. The LISP and Prolog programming languages. Case studies of implemented systems.

Does not require computer use. **5402:** Implementation of natural language understanding systems in LISP and Prolog. Laboratory projects.

5503. INTRODUCTION TO APPLIED LINGUISTICS. (4 cr; prereq 3001 or 3005 or 5001 or #)

The role of linguistics in neighboring disciplines; applications to practical fields such as lexicography, orthography, translation, language planning, reading, English and foreign language teaching, bilingual education, education of the deaf and correction of language disorders; computer applications; forensic applications.

5601. INTRODUCTION TO HISTORICAL LINGUISTICS. (4 cr, \$3601; prereq 3001 or 5001 or #)

For description, see 3601.

5602, 5603. LANGUAGE CHANGE AND LINGUISTIC RECONSTRUCTION. (4 cr per qtr; prereq 3601 or 5601, 5201, 5302 or #)

Phonological and syntactic change; internal and comparative approaches to linguistic reconstruction.

5605f-5606w. INDO-EUROPEAN LINGUISTICS. (4 cr per qtr; prereq 3601 or 5601 or #)

Reconstruction of Proto-Indo-European phonology, morphology, and syntax; principal developments in major Indo-European languages.

5691. HISTORY OF LINGUISTICS. (4 cr; prereq 3601 or 5601, 5202, 5303 or #)

Objectives and methods of linguistic analysis from antiquity to present.

5701. CONTRASTIVE LINGUISTICS. (4 cr; prereq 5002 or 5201 and 5302, 5003 or #)
Comparison of related sets of data in different languages; implications for linguistic theory and foreign language learning.

5702. SECOND-LANGUAGE ACQUISITION. (4 cr; prereq 3001 or 5001, 5002 or 5201 and 5302, 5701 or #5701 or #)
Empirical and theoretical studies of second-language acquisition and processing.

5705. INTRODUCTION TO ENGLISH AS A SECOND LANGUAGE. (5 cr; not open to English as a second language majors)
Current issues in teaching English as a second language; grammatical, phonological, and lexical systems of English; testing and evaluation; classroom applications to skills of listening, speaking, reading, writing; evaluation of instructional materials. Lectures and discussion sections.

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; S-N only; prereq major or minor in ESL, 5721, #)
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.

5731-5732. A CONTRASTIVE APPROACH TO MODERN ENGLISH. (4 cr per qtr; prereq 3001 or 5001 or #; not open to English as a second language or linguistics majors)
Linguistic structures of standard English and contrastive analysis of these structures with those of another language, with implications for the learning of English as a second language.

5741-5742. LINGUISTIC DESCRIPTION OF MODERN ENGLISH. (4 cr per qtr; prereq 3001 or 5001 or #)
Word and sentence structure in present-day English.

5801. INTRODUCTION TO LANGUAGE LEARNING. (4 cr; prereq 3001 or 5001 or #; does not fulfill degree requirements for majors in linguistics or ESL)
Overview of first- and second-language learning.

5805. PSYCHOLINGUISTICS. (4 cr; prereq 5002... or 5201 and 5302... or #)
Empirical and theoretical studies of language acquisition and processing.

5811. INTRODUCTION TO LANGUAGE VARIATION. (4 cr; prereq 3001 or 5001 or #)
Basic issues in language variation; regional determinants of variation, social determinants of variation, multilingual speakers and their societies, language planning.

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 linguistics or ESL major, #)
Guided individual reading or study.

English as a Second Language (ESL)

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 admitted to classes at the four levels shown below, according to proficiency tests administered through the program office, 152 Klaeber Court.

0100. ELEMENTARY ENGLISH AS A SECOND LANGUAGE. (No cr; for students who are engaged full time in English study; prereq Δ ; 25 hrs per wk; special fee)

0110. LOWER INTERMEDIATE ENGLISH AS A SECOND LANGUAGE. (No cr; for students whose level of English proficiency may allow them to take one academic class; prereq Δ ; 20-25 hrs per wk; special fee)

0120. UPPER INTERMEDIATE ENGLISH AS A SECOND LANGUAGE. (No cr; for students whose level of English proficiency may allow them to take two academic classes; prereq Δ ; 10-20 hrs per wk; special fee)

0130. ADVANCED ENGLISH AS A SECOND LANGUAGE. (No cr; for students who need supplementary work in specific English skills areas; prereq Δ ; 5-10 hrs per wk; special fee)

School of Management

CLA students may take up to 16 credits of course work offered by other colleges. The credits may be applied toward CLA degrees, but may not be used to fulfill group distribution requirements. Descriptions of courses offered by the School of Management can be found in the bulletin of that college.

Major Requirements and Course Descriptions

Information about requirements for entering the School of Management can be found in the third section of this bulletin.

Marathi

See South and Southwest Asian Studies.

Mathematics (Math)

Institute of Technology

Staff—Head, Richard McGehee, Jr., 127 Vincent Hall; **Associate Head,** John A. Eagon, 127 Vincent Hall; **Director of Undergraduate Studies,** Hillel Gershenson, 127 Vincent Hall; **Director of Graduate Studies,** Naresh Jain, 127 Vincent Hall
Regents' Professors: Markus, Serrin
Professors: Aeppli, Aronson, Baxter, Berger, Bramson, Eagon, Ellis, Ericksen, Fabes, Fristedt, S. Gaal, Gil de Lamadrid, Goldman, Green, Gulliver, Hardt, Harris, Hejhal, Jain, Kahn, Kenig, Keynes, Kinderlehrer, Littman, Loud, Luskin, Marden, McCarthy, McGehee, Messing, Meyers, Miller, Ni, Nitsche, Olver, Orey, Pohl, Pour-El, Prikrý, Pruitt, Reich, Rejto, Richards, Roberts, Sattinger, Sell, Sibuya, Sperber, Stanton, Storvick, Webster, Weinberger, White
Associate Professors: Agard, Anderson, Brauer, Conn, Edelman, Feshbach, Frank, Fuhrken, L. Gaal, Garrett, Gershenson, Gray, Harper, Jenkins, Jodeit, Joichi, Lang, Miracle, Moeckel, Richter, Stenberg, Striebel, Thompson
Assistant Professor: Triantafillou

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*.

Placement of Students—Entering freshmen are assigned math classification numbers (available in their college offices) based on high school grades and ACT and SAT tests. Courses are chosen in consultation with an adviser. Advanced standing students are placed in courses according to their previous academic records.

Honors—Information about honors courses and graduation with honors may be obtained in the Mathematics office, 127 Vincent Hall.

Credit—No credit is granted for course A, if course B has already been completed (see table below).

A	B
1008	1201
1142	1211, 1511H, 1611
1201	1008, 1111
1211	1142, 1411, 1511H, 1611
1221	1321, 1421, 1521H, 1621
1231	1331, 1431, 1531H, 1621
1321	1221, 1421, 1521H, 1621
1331	1231, 1431, 1531H, 1621
1411	1211, 1511H, 1611
1421	1221, 1321, 1521H, 1621
1431	1231, 1331, 1531H, 1621
1511H	1142, 1211, 1411, 1611
1521H	1221, 1321, 1421, 1621
1531H	1231, 1331, 1431, 1621
1611	1142, 1211, 1411, 1511H
1621	1231, 1331, 1431, 1531H
3066	3213, 3221, 3521
3142	3213, 3221, 3511
3211	3411, 3521
3212	3231, 3421
3213	3066, 3142, 3221, 3421, 3511
3221	3066, 3142, 3212, 3511
3231	3212, 3531
3411	3142, 3211, 3213, 3221, 3511
3421	3066, 3211, 3521
3511	3142, 3213, 3221, 3411
3521	3066, 3211, 3421

B.A. Major Sequence

Required Preparatory Courses—One freshman sequence: 1211-1221-1231; 1211-1321-1331; 1411, 1421, 1431; 1511-1521-1531; or 1611-1621

One sophomore sequence: 3511-3521-3531; 3211, 3212, 3213; 3211, 3221, 3231; 3211, 3221, 3675; 3211, 3066, 3142. The first sequence is highly recommended for high ability students (see the prerequisites for 3511); the second sequence is recommended for others. For 3411-3421, consult the director of the IT honors program.

Major Requirements—36 cr in 5xxx courses including 5601-5602 or 5612-

5613; 5232-5233 or 5242-5243 or 5282-5283; and a three-qr sequence (which may be satisfied by taking the third qr of one of the previous sequences)

Courses in the major must be taken on A-F grading. Grades of D in courses in the major do not fulfill major requirements.

All majors are required to file a one-year plan each year in the Mathematics office, 127 Vincent Hall.

B.A. Major Sequence— Actuarial Science Emphasis

This is an option within the B.A. degree in mathematics, designed to prepare students to work in the actuarial field.

Required Preparatory Courses—Same as the mathematics major

Major Requirements—A. Sufficient mathematics courses must be completed to meet the requirements of a mathematics major and must include 5242, 5243; 5056, 5057, 5058; three courses from the following: 5679, 5681, 5682, 5683, Stat 5131, 5132, 5133

B. The following courses outside mathematics are required: Acct 1024, 1025; BFin 3000; Econ 1004, 1005; Ins 3100; one course in computer science at the 3xxx-5xxx level

In addition to the required courses, there are a number of recommended courses in mathematics and other subjects. A list of these courses is available from the School of Mathematics.

Minor Sequence

Minor Requirements—Completion of required preparatory courses for the major and three 5xxx mathematics courses including two courses in a single sequence

Courses in the minor must be taken on A-F grading.

0005. ARITHMETIC FOR ADULTS. (No cr; 3 hrs per wk; special fee)

Practical course in elementary mathematics. Arithmetic of whole numbers, fractions, and decimal fractions. Computations. Measurement of length, area, and volume. Percentage problems. Statistics, probability, and computer programming (BASIC).

0006. ELEMENTARY ALGEBRA. (No cr; 5 hrs per wk; special fee)

Elements of algebra through quadratic equations (equivalent to ninth-grade algebra).

0007. PLANE GEOMETRY. (No cr; 5 hrs per wk; prereq one yr high school algebra or grade of C or better in 0006; special fee)

Elements of plane geometry; equivalent to one year of high school plane geometry with adequate time given to each topic.

0009. INTERMEDIATE ALGEBRA. (No cr; prereq 1 yr high school algebra or grade of C or better in 0006; 5 hrs per wk; special fee)

Covers high school higher algebra.

1005. INTRODUCTION TO ELEMENTARY MATHEMATICS. (4 cr; prereq plane geometry, 2 yrs high school algebra or plane geometry, grade of C or better in 0009)

For pre-elementary education students. Elementary computer programming (BASIC), progressions, financial mathematics, counting problems, other selected topics.

1006. INTRODUCTION TO ELEMENTARY MATHEMATICS. (4 cr; prereq 1005, pre-elementary education students only; 0 cr for other CLA students)

Restricted to elementary education students. Continued computer use. Topics such as probability theory, geometry, and number theory.

1008. TRIGONOMETRY. (4 cr; prereq plane geometry, 2 yrs high school algebra... or 1111, plane geometry, grade of C or better in 0009)

Analytic trigonometry, identities, equations, properties of the trigonometry functions; right and oblique triangles.

1111. COLLEGE ALGEBRA AND ANALYTICAL GEOMETRY. (5 cr, \$1201; prereq plane geometry, 2 yrs high school algebra... or plane geometry, grade of C or better in 0009)

Functions, graphs, quadratic equations, progressions, inequalities, complex numbers, theory of equations, permutations and combinations, probability, systems of equations, determinants, graphing of linear and quadratic equations, conics and standard position, logarithms.

1131. FINITE MATHEMATICS. (5 cr; for students in prebusiness and social and behavioral sciences; prereq 3¹/₂ yrs high school math or grade of C or better in 1111)

Elementary computer programming, financial mathematics, probability, linear algebra, linear programming, Markov chains.

1142. SHORT CALCULUS. (5 cr, \$1211, \$1511H, \$1611; for students requiring a minimal amount of calculus; prereq 3¹/₂ yrs high school math or grade of C or better in 1111 or 1201)

Derivatives, integrals, differential equations, maxima and minima, partial differentiation, applications.

Major Requirements and Course Descriptions

1201. PRE-CALCULUS. (5 cr, §1008, §1111; for students who need to review high school higher algebra and trigonometry before taking a calculus sequence; prereq 4 yrs high school math including trigonometry) Inequalities, analytical geometry; complex numbers, binomial theorem; mathematical induction; functions and graphs; trigonometric, exponential, and logarithmic functions.

1211-1221-1231. CALCULUS I-II-III. (5 cr per qtr; prereq 4 yrs high school math including trigonometry... or grade of C or better in 1201... or grade of C or better in 1008 and 1111... or equiv... grade of C or better required to continue in sequence)

Analytical geometry and calculus of functions of one variable, applications. Infinite series and sequences.

1321-1331. COMPUTER CALCULUS II-III. (5 cr per qtr; prereq 4 yrs high school math including trigonometry... or grade of C or better in 1201... or grade of C or better in 1008 and 1111... or equiv... grade of C or better required to continue in sequence) Essentially the same as 1221-1231 but topics presented from a computer viewpoint and in a different order.

1411H-1421H-1431H. INTEGRATED HONORS CALCULUS I-II-III. (5 cr per qtr, §1211-1221-1231, 1321-1331, 1511H-1521H-1531H, 1611-1621; prereq selection for IT honors curriculum or consent of IT honors office)

Integrated honors sequence for students in honors program. Emphasis on conceptual basis of mathematics and the relation of mathematics to engineering and the sciences.

1511H-1521H-1531H. HONORS CALCULUS I-II-III. (5 cr per qtr; prereq Δ)

Honors sequence for high ability students. Covers content of 1211-1221-1231 with emphasis on theory but computational aspects are not neglected.

1611H-1621H. HONORS: ACCELERATED CALCULUS I-II. (5 cr per qtr; prereq Δ)

Accelerated sequence for high ability students. Covers content of 1211-1221-1231 with emphasis on computational aspects.

1711H-1721H-1731H. SECONDARY STUDENTS HONORS CALCULUS I-II-III. (5 cr per qtr; prereq #, Δ)

Accelerated honors sequence for selected mathematically talented high school students. Essentially the same as 1511H-1521H-1531H, plus applications to science and engineering. Emphasis on theory and computations.

3001. MATHEMATICS AS A HUMAN ENDEAVOR. (1 cr; prereq 1221 or equiv or #; S-N only)

Mathematics as a career. Lectures by academic and industrial mathematicians and practitioners in related areas. Applications to science, engineering, and business. Mathematics as a science, a liberal art, and a human activity.

3066. ELEMENTARY DIFFERENTIAL EQUATIONS. (4 cr, §3213, §3221, §3521; prereq grade of C or better in 1231 or equiv)

Elementary techniques of problem solving. First- and second-order equations, linear equations of higher order.

3142. INTRODUCTION TO LINEAR ALGEBRA. (4 cr, §3213, §3221, §3511; prereq grade of C or better in 1231 or equiv)

Vectors, systems of linear equations, matrices, determinants, eigenvalues, applications. Techniques and some proofs of theorems.

3161. GEOMETRIC STRUCTURES AND TRANSFORMATIONS. (4 cr; prereq 1231, 3142 or 3511 or 3221 or equiv)

Metric and analytic geometry in two and more dimensions; transformations. Topics such as the theorem of Pappus, Euler's formula for polyhedra, rigid motion transformations, similarity transformations, geometry and trigonometry on the sphere, and convexity.

3211. MULTIVARIABLE CALCULUS. (5 cr, §3521; prereq grade of C or better in 1231 or equiv)

Partial differentiation, chain rule, implicit functions, applications. Multiple integrals in two and three dimensions.

3212. VECTOR AND LINEAR ANALYSIS I. (5 cr, §3212; prereq grade of C or better in 3211 or equiv)

Scalar and vector products, derivatives, space curves, del operator, line and surface integrals, divergence, Green's and Stokes' theorem, first order ordinary differential equations, matrices, determinants, dimension, applications.

3213. VECTOR AND LINEAR ANALYSIS II.

(5 cr, §3066, §3142, §3221, §3511; prereq grade of C or better in 3212 or equiv)

Linear spaces, linear transformations, eigenvalues, diagonalization, second order linear ordinary differential equations, variation of parameters, linear systems, applications.

3221. INTRODUCTION TO LINEAR ALGEBRA AND LINEAR DIFFERENTIAL EQUATIONS.

(5 cr, §3066, §3142, §3212, §3511; prereq grade of C or better in 1231 or equiv)

Vectors, systems of linear equations, matrices, determinants, bases, eigenvalues. Linear differential equations and systems with constant coefficients, initial value problem and general solution, variation of parameters for inhomogeneous equations.

3231. VECTOR ANALYSIS. (5 cr, §3212, §3531; prereq grade of C or better in 3211 or equiv)

Scalar and vector products, derivatives, geometry of space curves, del operator, line and surface integrals, divergence and Stokes theorem, transformation of coordinates, dyadics, applications.

3411H-3421H. INTEGRATED HONORS CALCULUS IV AND V. (5 cr per qtr, §3211-3221-3231, 3212-3213, 3511-3521-3531; prereq selection for IT honors curriculum or consent of IT honors office, grade of B or better in 1431)

Integrated honors sequence for students in honors program. Emphasis on conceptual basis of mathematics and the relation of mathematics to engineering and the sciences.

3511-3521-3531. HONORS: LINEAR ANALYSIS I-II-III. (5 cr per qtr, §3142, §3213, §3221 for 3511; §3066, §3211 for 3521; primarily for high-ability math majors, engineers, scientists; prereq grade of B or better in 1231 or equiv...grade of C or better to continue in sequence)

3511H: Ideas and computations of linear algebra including linear independence, linear transformations, matrices, and determinants. *3521H-3531H:* Calculus of several variables relying heavily on linear algebra including differentiation and integration of functions of several variables, coordinate systems, Jacobian of a map, application of concepts and computations to vector analysis, basics of linear differential equations. Applications. Order of topics may vary.

3675. INTRODUCTORY MATHEMATICS. (4 cr; prereq 1231 or equiv)

Designed to bridge the gap between elementary computational courses and theoretical courses encountered at the 5xxx level.

3711H. SECONDARY STUDENTS HONORS CALCULUS IV. (5 cr; prereq 1731H)

Accelerated honors course for selected mathematically talented high school students. Multivariable calculus, linear algebra, applications to science and engineering. Emphasis on theory and computations.

5005. THE DIVERSITY OF MATHEMATICS.

(4 cr; prereq 1005-1006 or equiv, 10 additional cr of university level math courses, elementary education majors only; no credit for others)

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 university level math courses, elementary education majors only; no credit for others)

Mathematics enrichment topics for elementary school instructors: polyhedra, map coloring, analytic geometry, finite arithmetics and geometries, projective geometry.

5007. THE DIVERSITY OF MATHEMATICS.

(4 cr; prereq 1005-1006 or equiv, 10 cr of university level math courses, elementary education majors only; no credit for others)

Mathematics enrichment topics for elementary school instructors: the theory of area, probability, mathematical games, combinatorics and graph theory.

5056. THEORY OF INTEREST. (4 cr; prereq 1231 or equiv)

Application of compound interest formulas to annuities, sinking funds, bonds, and similar items. Primarily for mathematics and business majors interested in actuarial science.

5057-5058. ACTUARIAL SCIENCE PRINCIPLES—LIFE CONTINGENCIES I-II. (4 cr; prereq 1231, 5056 and one qtr probability or statistics for 5057...5057 for 5058)

5057: How to calculate net premiums, gross premiums, reserves, and nonforfeiture values of major life insurance contracts. Impact of assumed mortality, interest, and expense assumptions on these items. *5058:* Multiple life functions; multiple-decrement function (tables) and tables with secondary decrements. Generalized models. Relationships involving compound contingent functions and use with forces of interest.

5081. FUNDAMENTAL TOPICS OF ANALYSIS. (4 cr; prereq 3211 or §3531; does not satisfy 5xxx-level requirements for math majors)

Topics in analysis to develop analytic abilities and to broaden perspective on and enhance interest in mathematics. May include real number systems, theory of sets, continuous functions, and properties of limits.

5082. FUNDAMENTALS OF ALGEBRA. (4 cr, no 5xxx-level cr for math majors; prereq 3511 or 3142 or 3221 or equiv)

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; prereq 3511 or 3211 or 3221 or 3142 or equiv)

One non-Euclidean geometry including attention to the axiomatic approach; some topics involving three or more dimensions; some use of transformations, possibly other topics. Includes proof of mathematical inductions and by contradiction.

5151. ELEMENTARY SET THEORY. (4 cr; prereq 3211 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 3211 or equiv or #)

Sets and relations; statement calculus; Boolean algebras; predicate calculus, models, validity and truth; first-order theories as illustrations of the axiomatic method; the completeness theorem; the incompleteness theorem and metamathematics.

5162-5163-5164. MATHEMATICAL LOGIC. (4 cr per qtr; prereq 3211, 3142... or 3211, 3221...or equiv... or Phil 3202 or #)

5162: Theory of computability, the notion of algorithm, Turing machines, primitive recursive functions, recursive functions, Kleene Normal form, the recursion theorem. *5163:* Probability and truth in formal systems: propositional and predicate logic, models of axiom systems, Gödel completeness, theorem, non-standard analysis. *5164:* Gödel incompleteness theorem: decidable and undecidable theories, models of arithmetic.

Major Requirements and Course Descriptions

5209. THEORY OF NUMBERS. (4 cr; prereq 3211 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, \$5262 or \$5282 if content was linear algebra, \$5264, \$5284; prereq 3142 or 3221 or equiv or #)

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, \$5232-5233, \$5262 or \$5282 if content was linear algebra, \$5264, \$5284; prereq 3142 or 3221 or equiv or #)

Systems of linear equations, finite dimensional linear spaces, bases, linear transformations, matrices, determinants, eigenvalues, reduction to canonical forms, quadratic and bilinear forms, applications.

5244. GROUP THEORY. (4 cr per qtr, \$5262, \$5282; prereq 3142 or 3221 or equiv or #)

Permutations groups; groups related to geometrical configuration; invariant subgroups, Jordan-Holder composition theorem, Sylow groups, abelian groups, elementary divisors, applications.

5282-5283-5284. FUNDAMENTAL STRUCTURES OF ALGEBRA. (4 cr per qtr; prereq one soph sequence or #... some previous abstract mathematics 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.

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 3211 or equiv or #)

Plane and space curves. Frenet formulas, elementary theory of surfaces.

5376-5377. DIFFERENTIAL GEOMETRY. (4 cr per qtr; prereq 5375 and 1 qtr linear algebra) Differential forms. Advanced theory of surfaces, integral geometry, Riemannian geometry.

5404. VARIATIONAL PROBLEMS. (4 cr; prereq 3211, 3066...or 3211, 3221...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 3211, 3066, 3142... or 3211, 3221... or equiv or #)

Mathematical models and associated mathematical techniques for describing the behavior of and for optimizing various systems. How to find a model for a given situation.

5441. MATHEMATICAL THEORY OF FLUID FLOW. (4 cr; prereq 5568 or 5572 or equiv or #)

General equations of fluid mechanics; thermodynamics. Classical constitutive equations. Specialization to various subfields of fluid mechanics, hydrostatics, barotropic perfect fluids, gas dynamics, and viscous flow theory. Examples of exact solutions.

5447-5448-5449. MATHEMATICAL THERMODYNAMICS. (4 cr per qtr; primarily for mathematics majors interested in applications, engineers, scientists; prereq 3066, 5601...or 5613...or 5567, 5568...or #)

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 reversible and distributed systems, and concept of entropy. **5449:** Equilibrium of thermal systems. Gibbsian equilibrium theory and the phase rule; applications to mixtures and to phase transitions. Mechanical theory of equilibrium. Thermodynamics of irreversible processes; theory of quasi-ideal systems and continuous systems. Clausius-Duhem inequality.

5457-5458-5459. METHODS OF APPLIED MATHEMATICS. (4 cr per qtr; prereq 3211, 3066... or 3211, 3221... or equiv or #)

Analytic tools used in applications of mathematics; emphasis on technique. Real and complex variables, matrices, ordinary and partial differential equations, calculus of variations, asymptotic expansions.

5473-5474-5475. ANALYSIS OF NUMERICAL METHODS. (4 cr per qtr; prereq 3211 and 3142 or equiv for 5473-5474... 3211, 3221 or 3211, 3142, 3066 or equiv and 5474 for 5475)

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.

5476. THEORY OF APPROXIMATION IN NUMERICAL ANALYSIS. (4 cr; prereq 5473, 5568 or 5573)

Orthogonal functions, Chebyshev approximations, trigonometric approximations, saturation classes, rational approximations, approximations in several variables, spline interpolation and approximations, use of approximation in computing.

5477-5478-5479. APPLIED NUMERICAL ANALYSIS OF PARTIAL DIFFERENTIAL EQUATIONS. (4 cr per qtr; prereq 5567 or 5571 or equiv; 3 lect per wk, informal lab)

Numerical methods for the partial differential equations of linear and nonlinear elasticity, compressible and incompressible fluid flow, multiphase flow, heat transfer, and other selected systems of partial differential equations.

5512. DIFFERENTIAL EQUATIONS WITH APPLICATIONS I. (4 cr; prereq 3211, 3066... or 3211, 3221... or equiv or #)

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. DIFFERENTIAL EQUATIONS WITH APPLICATIONS II. (4 cr; prereq 5512)

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.

5521-5522-5523. INTRODUCTION TO ORDINARY DIFFERENTIAL EQUATIONS. (4 cr per qtr; prereq one soph sequence or #)

5521: Existence and uniqueness theorems; successive approximations; differential inequalities; linear systems; fundamental matrix solutions; linear systems with constant coefficients; variation of parameters. **5522:** Phase plane analysis; Poincaré-Bendixson theory; linear and nonlinear oscillations; stability theory; asymptotic behavior of solutions; control theory. **5523:** Power series solutions, majorant method; regular and irregular singular points; error estimates; perturbation methods.

5567. FOURIER SERIES AND BOUNDARY VALUE PROBLEMS. (4 cr, §5571; prereq 3211, 3066... or 3211, 3221... or equiv or #)

Partial differential equations of theoretical physics. Fourier series, proof of convergence, orthogonal systems. Sturm-Liouville systems, solution of boundary value problems by separation of variables, applications.

5568. ELEMENTARY THEORY OF COMPLEX VARIABLES. (4 cr, §5572; prereq 3231 or 5602 or equiv course in vector analysis)

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 5603 or 5613)

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.

5601-5602-5603. ADVANCED CALCULUS. (4 cr per qtr; prereq 3211 or equiv or #)

5601: Differentiation of functions of several variables; vector algebra; curves in three dimensions; directional derivative and gradient, inverse transformation and implicit function theorems; change of variables in multiple integrals. **5602:** Line and surface integrals; Stokes theorem; convergence of infinite series; orthogonal functions; uniform convergence; integration and differentiation of series. **5603:** Real numbers; continuous functions; limits; properties of continuous functions; differentiation; the Riemann integral; improper integrals.

5612-5613-5614. INTRODUCTION TO ANALYSIS. (4 cr per qtr; principally for students planning a grad major in mathematics, as preparation for grad courses in analysis; prereq one soph sequence or #)

Theory of real numbers; elements of point set theory; limits; differentiation; multivariable analysis.

5679. PROBABILITY. (4 cr, §5681; prereq 3211 or equiv or #)

Elementary principles of probability, total and compound probability, expectation, repeated trials, and topics chosen from the following: Stirling formula, the probability integral, geometrical probability, probability of causes, Bayes theorem, errors of observation, principle of least squares.

5681-5682-5683. INTRODUCTION TO PROBABILITY. (4 cr per qtr; prereq 3531 or 3631 or two 5xxx math courses or Stat 5133 or #)

Logical development and various applications of probability. Probability spaces, random variables, central limit theorem; Markov chains.

Major Requirements and Course Descriptions

5701. ENUMERATIVE COMBINATORICS. (4 cr; prereq 3211 or equiv, 3rd-yr standing...soph level linear algebra is 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 3211 or equiv, 3rd-yr standing...soph level linear algebra is 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. Definitions and examples of designs, Latin squares, and codes.

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, 1015 Mayo Memorial Building

Professors: Anderson, Bach, Chapman (on leave, 1986-87), Cleary, Crawford, Dworkin, Eaton, Fan, Faras, Germaine, Haase, Hanson, Hooper, Johnson, Jordan, Kersey, McKay, Plagemann, Quie, Rogers, Sauerbier, Schachtele, Schmidt, Simmons

Associate Professors: Bey, Gray, LeBien, Prince, Reilly, Schlievert, Zissler

Assistant Professors: Click, Fontana, Gleason, Jemmerson, Liljemark, Nelson, Scherer, Schottel, Vessella, Wells

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 potentialities 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 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 1004-1005, 3100-3101, 3301-3302, 3305-3306, and 3303 or Biol 5001; Math 1211-1221-1231 or 1311-1321-1331 or 1611-1621 or two quarters of calculus with two quarters of statistics; Phys 1041-1042-1045-1046 or 1104-1105-1106-1107-1108-1109 or 1271-1281-1291, 1275-1285-1295 or 1311-1321-1331-1341, 1275-1285-1295

Major Requirements—3103 or 5105 or VPB 3103 or Biol 5013; MicB 5216 or 5218, 5321, 5900

12 or 13 3xxx-5xxx cr in microbiology or related courses (depending on your interests; related courses may be in botany, biology, ecology and behavioral biology, food science and nutrition, genetics and cell biology, medical technology, public health, or laboratory medicine)

1101w.¹ ELEMENTARY MICROBIOLOGY. (4 cr; intended for students in CLA, dental hygiene, physical therapy, mortuary science...others #...not intended for majors; prereq Biol 1009 or *Biol 1009 or equiv) Prince

Principles of microbiology; a general survey of pathogenic bacteria, molds, protozoa, and viruses; elements of immunity, sanitary analysis of water and milk, disinfectants and sterilants.

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 in chemistry and 5 cr in biological sciences or #) Morphology, physiology, taxonomy, and ecology of bacteria. Applications of fundamental principles. Laboratory.

¹Microscope required. Students may obtain use of microscope by purchasing two \$3 microscope cards from the bursar.

VPB 3103f,s.¹ GENERAL MICROBIOLOGY. (5 cr, §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 Biol 5001) Crawford, Hanson, Schmidt
Taxonomy, anatomy, physiology, biochemistry, and ecology of microbes. Molecular structure in relation to bacterial function.

CLS 5103w. PRINCIPLES OF DIAGNOSTIC MICROBIOLOGY. (3 cr; prereq general course in microbiology, #) Wells
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, Biol 5001 or #) Crawford, Hanson, Schmidt
Taxonomy, anatomy, physiology, biochemistry, and ecology of microbes. Molecular structure in relation to bacterial function. Laboratory.

5106f.¹ ADVANCED GENERAL MICROBIOLOGY LABORATORY. (3 cr; prereq 5105 or equiv) Dworkin
Isolation from natural sources of a variety of microorganisms such as *Clostridium*, yeast, *Caulobacter*, myxobacteria, *Leptospira*, photosynthetic bacteria, *Bdellovibrio*, luminescent bacteria, and others. Laboratory only.

FScN 5120w. FOOD MICROBIOLOGY. (5 cr; prereq MicB 3103) Tatini
Relationship of environment to occurrence, growth, and survival of microorganisms in foods; evaluation of microbiological quality of dairy and food products; characteristics and activities of bacteria, yeasts, and molds related to food spoilage; utilization of microorganisms in manufacture of dairy and food products; recognition and control of food-borne pathogens and food poisoning.

FScN 5122s. SANITATION AND CONTROL OF MICROORGANISMS. (2 cr; prereq FScN 5120 or # ... †FScN 5123 recommended, especially for food science and technology majors) Zottola
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 advised, especially for food science and technology majors) McKay
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 products consumed as food, and in waste utilization.

Biol 5125f,w,s. RECOMBINANT DNA LABORATORY. (4 cr; prereq #) Hackett, Das, staff
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 alternate years) Wells
Laboratory diagnosis of infections caused by yeasts, dermatophytes, and systemic fungi.

CLS 5136s. ANAEROBIC BACTERIOLOGY. (4 cr; prereq biochemistry, medical microbiology, diagnostic microbiology or #; offered alt yrs) Wells
Anaerobic respiration in bacteria. Methods of anaerobic culture. Taxonomy and classification of anaerobes. Biochemical and gas chromatographic differentiation of anaerobes. The role of anaerobes in disease.

PubH 5171w. ENVIRONMENTAL MICROBIOLOGY. (3 cr; prereq MicB 3103 or #) Ruschmeyer, Vesley
Survival, dissemination, transportation, and significance of microorganisms in the environment; application of principles to environmental health problems.

5216f. IMMUNOLOGY. (4 cr; prereq Biol 5001) Gray
Nature of antigens and antibodies; chemical basis of serologic specificity; qualitative and quantitative aspects of antigen-antibody reactions; theories of antibody production; cellular antigens and blood grouping; nature of complement and its role in immunologic phenomena; mechanisms of hypersensitivity; hypersensitivity-like states and immunologic diseases; transplantation and tumor immunity; host-parasite interactions. Laboratory.

5218f. IMMUNOLOGY. (3 cr; prereq Biol 5001) Gray
Same as 5216 without laboratory.

5232s. MEDICAL MICROBIOLOGY. (3 cr; not open to medical students; prereq 5216 or 5218, 5105 or 3103 or 8110 or Biol 3013) 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.

¹Microscope required. Students may obtain use of microscope by purchasing two \$3 microscope cards from the bursar.

Major Requirements and Course Descriptions

5233f.¹ MICROORGANISMS AND DISEASE. (7 cr; not open to microbiology majors; prereq 10 cr chemistry and 5 cr biological sciences or #) Johnson Nature of microorganisms, immunology, medical bacteriology, virology, mycology, parasitology, and principles of disease control. Laboratory.

5234s.¹ MEDICAL MICROBIOLOGY LABORATORY. (2 cr; prereq 5232 or 45232) Cleary Exercises demonstrating the principles and techniques employed in the study of the interactions between microorganisms and humans that lead to a diseased state.

5235f. MICROORGANISMS AND DISEASE. (4 cr; not open to microbiology majors; prereq 10 cr in chemistry and 5 cr in biological sciences or #) Johnson Same as 5233 without laboratory.

5321w. 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.

5322w. PHYSIOLOGY OF BACTERIA LABORATORY. (2 cr; prereq 5321 or 45321, lab course in basic bacteriology) Rogers Techniques employed in study of bacterial physiology and metabolism.

PubH 5342f,w,s. PUBLIC HEALTH BACTERIOLOGY. (Cr ar; prereq MicB 5216, 5232, 5234, #) Bacteriologic and serologic diagnosis, public health laboratory administration and methods.

5352f. APPLIED MICROBIOLOGY. (4 cr; prereq 5321 or #) Crawford, Hanson 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. (4 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. Laboratory.

5811su. FIELD STUDIES IN MICROBIAL ECOLOGY. (5 cr; prereq course in microbiology) Crawford Natural microbial populations: enumeration of specific types of microorganisms in natural environments, enrichment techniques, submerged slide culture, and observations of natural, microbiological phenomena.

5900f,w,s. TOPICS IN MICROBIOLOGY. (1 cr; S-N only; open to sr microbiology majors) Rogers 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.

Middle Eastern Studies

See South and Southwest Asian Studies.

Military Science

See Reserve Officers' Training Corps.

Modern Greek

See Classics.

Music (Mus)

Staff—Acting Director, Stephen Schultz, 200 Ferguson Hall; **Head, Band and Orchestra Instruments, Jazz Studies,** Young-Nam Kim; **Head, Choral/Opera/Vocal Studies,** Thomas Lancaster; **Head, Composition/Theory,** Dominick Argento; **Head, Keyboard and Fretted Instruments,** Paul Freed; **Head, Music Education/Therapy,** Robert Borg; **Head, Musicology/Ethnomusicology,** Vern Sutton; **Director of Graduate Studies,** Edgar Turrentine; **Director of Undergraduate Studies,** John Anderson; **Assistant to the Director,** Charles Byrne
Regents' Professor: Argento

Professors: Baldwin, Benciscutto, Cardamone-Jackson, Caswell, Fetler, Freed, T. Lancaster, Massmann, Stokes, Sutton, Turrentine, Ultan

Associate Professors: Anderson, Borg, Buckner, Engebretson, Kagan, Kim, Lubet, McClary, McNab, Remenikova, Schultz, Shockley, Ware, Weller

Assistant Professors: Billmeyer, Damschroder, Furman, Kopetz

¹Microscope required. Students may obtain use of microscope by purchasing two \$3 microscope cards from the bursar.

Affiliated Faculty—Angelucci, Bordner, Braginsky, Burris, Capps, Clute, Culp, Dahlgren, D. Eagle, E. Eagle, Fine, Foli, Haugen, Holub, Ivory, Jamieson, Kamminga, Kierig, N. Lancaster, Laskin, Laureano, Levine, Lund, McDonald, McGuire, Malmberg, F. Miller, J. Miller, Reader, Ricketts, Robinson, Smith, Tartaglia, Thomson, Tolbert, Van, Williams, Zeitlin, Zellmer

The School of Music offers the B.A. and B.M. degrees in music and, through the College of Education, the B.S. degree in 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 course work outside the major. The program is recommended for students expecting to pursue major work in music history or musicology. It is not recommended for students planning professional careers in other music subfields.

The B.M. program is designed for students who wish to complete professional studies in performance or in composition and theory. A total of 180 credits, 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, students must take a qualifying examination in which they perform (play or sing) in the area of their specialty.

The B.S. program is designed for students who wish to major in music education or music therapy. To enter the program, students transfer to the College of Education upon completion of the core requirements, usually at the end of the sophomore year. Descriptions of music education courses can be found in the *College of Education Bulletin*.

To be admitted to the major for any of the three degree programs, you must audition and be placed in a suitable level of applied music study. Majors are encouraged to pass a piano proficiency test as early as possible after admission to the major, but no later than the sophomore

year. Transfer students are placed on the basis of an entrance audition and examinations in music theory and music history.

You should consult with your adviser in selecting courses to satisfy all requirements.

The School of Music is a full member of the National Association of Schools of Music.

B.A. Major Sequence

Major Requirements—Applied Music (major instrument or voice): 12 cr at the 12xx level or higher

Theory: 1531, 1532, 1533, 3531, 3532, 3533

Ear Training: 1511, 1512, 1513, 3511, 3512, 3513

Music history: 1602, 1603, 1604, 1605, 1606

Ensemble participation: Minimum of 6 cr (one per qtr)

Major project: 3995

Music electives: 18 cr at the 3xxx-5xxx level

B.M. Major Sequence—Performance

Major Requirements—Applied Music (major instrument or voice): 12 cr at the 12xx-level or higher; 36 cr at the 32xx-level

Music Theory: 1531, 1532, 1533; 3531, 3532, 3533, 3534, 3535 and one elective course in music theory

Ear Training: 1511, 1512, 1513; 3511, 3512, 3513

Music History: 1602, 1603, 1604, 1605, 1606

Ensemble Participation: 12 credits

Senior Recital: 3995

Music Electives: to total a minimum of 117 credits in music

Information about special requirements in the various performance areas is available in the School of Music office.

Major Requirements and Course Descriptions

B. M. Major Sequence— Theory and Composition

Major Requirements—Applied Music (major instrument or voice): 12 cr at the 12xx-level or higher; 12 cr at the 32xx level

Music Theory: 1531, 1532, 1533; 3531, 3532, 3533, 3534, 3505, and 1 elective course in music theory

Ear Training: 1511, 1512, 1513; 3511, 3512, 3513

Music History: 1602, 1603, 1604, 1605, 1606

Composition: 3550, 4 cr

Orchestration: 5561, 5562, 5563

Advanced Music Theory: 5541, 5571 or 5572, 5532 or 5533

Ensemble Participation: 12 cr

Major Project: 3995

Music Electives: to total a minimum of 117 cr in music

B. M. Major Sequence— Jazz Studies

Major Requirements—Applied Music (major instrument or voice): 12 cr at the 12xx-level or higher; 6-12 cr at the 32xx-level

Music Theory: 1531, 1532, 1533; 3531, 3532, 3533, 3534, 3535, 1 elective course in music theory

Ear Training: 1511, 1512, 1513; 3511, 3512, 3513

Music History: 1602, 1603, 1604, 1605, 1606

Large Ensemble Participation: 3 cr

Jazz Ensemble: 1340, 5340 (9 cr)

Jazz Improvisation: 1330 (6 cr), 5330 (6 cr)

Afro-American Studies: Afro 1301, 3108

Piano Class Lessons: 1151, 1152, 1153

Jazz Class Piano: 1351, 1352

Jazz Composition/Arranging: 5540 (4 cr)

Music Electives: to total a minimum of 117 cr in music

Full Jazz Recital: senior year: 3995 (2 cr)

B. S. Major Sequence— Music Education and Music Therapy

Core Requirements (first two years)—Applied music: 12 cr at the 12xx level or higher

Music Theory: 1531, 1532, 1533, 1511, 1512, 1513, 3531, 3532, 3533

Ear Training: 1511, 1512, 1513; 3511, 3512, 3513

Music history: 14 cr from 1602, 1603, 1604, 1605, 1606

Ensemble participation: 6 cr (one per qtr)
Class piano: 1151, 1152, 1153 or exemption

General psychology: Psy 1001

For music education majors only: MuEd 1201

For music therapy majors only: MuEd 1801, 4 cr in abnormal psychology, 4 cr in anatomy, 5 cr in biology, 4 cr in physiology

A minimum grade average of C (2.00) in all course work taken prior to admission and C+ (2.50) in all course work taken in music theory, music history, and the principal applied area must be earned.

Students must complete an interview with a major adviser in music education or music therapy before their applications for admission will be given final consideration.

Major Requirements—*Music Education, Choral/General*: 10 cr of applied music at the 32xx level or higher; 6 cr or exemption in class voice and/or piano; 5377; minimum of 5 cr in ensembles in addition to core requirement; MuEd 3301, 3302, 3322, 3331, 3415, 3601; 12 cr of MuEd 3650; SeEd 3150 or Elem 3101; SeEd 3155 or Elem 3100; SPFE 3090; PsyF 3380; PsyS 3106; PubH 3004; minimum of 3 cr in physical education

Music Education, Instrumental: 6 cr of applied music at the 32xx level plus 4 cr in secondary instruments at the 14xx level; 3 cr in large ensembles in addition to core requirement, plus 3 cr in chamber ensembles; MuEd 3302, 3500, 3501, 3503, 3504, 3505, 3515, 3516, 3601; 12 cr in MuEd 3650; SeEd 3150 or Elem 3101; SeEd 3155 or Elem 3100; SPFE 3090; PsyF 3380; PsyS 3106; PubH 3004; minimum of 3 cr in physical education

Music Therapy: Minimum of 18 cr in applied music (including core requirements) to be selected in consultation with the music therapy adviser; minimum of 3

cr in ensembles (in addition to core requirements); MuEd 3322, 3415, 3501, 3503, 3504, 3505, 3515, 3601, 3800, 3801, 3802, 3804, 3805, 3806, 3850, 3851, 3852; PsyF 3380; PsyS 3106; PubH 3004; 3 cr in physical education (courses in dance and dance therapy recommended); one course in special education; 12 additional cr in the behavioral sciences, the social sciences, and special education selected in consultation with the major adviser

Minor Sequence

Plan A: Music in Society and Culture

Minor Requirements—20 cr selected from 3027, 3028, 3029, 3807, 3808, 5701, 5702, 5704, 5705, 5804, 5811

No more than 20% of the total credits may be taken on S-N grading.

Minor programs must be approved by the director of undergraduate studies.

Plan B: Performance

Minor Requirements—20 cr distributed as follows: 4 cr of either 1001 or 1501, 1511; 4-8 cr applied music 38xx (maximum of 2 cr per qtr); concurrent registration in ensembles; 4-8 cr ensembles; 4 cr 3021 (or any course listed under Plan A).

Admission to Plan B requires successful completion of an entrance audition. Minor programs must be approved by the director of undergraduate studies. Not more than 2 cr may be transferred into the program from another institution. No credits in this program may be taken S-N.

Plan C: Jazz Studies

Minor Requirements—A total of 21 cr is required from the following: 4 cr from either 1001 or 1531, 1511; Afro 3108; 4 cr of MusA 38xx; Mus 5340; Mus 5330.

Not more than 2 cr for the minor may be transferred into the program from another institution.

Admission to Plan C requires successful completion of an entrance audition.

Minor programs must be approved by the director of undergraduate studies.

Introductory and Survey (For Non-Music Majors)

1001f,w,s. FUNDAMENTALS OF MUSIC. (4 cr; for non-music majors)
Basic musical elements, functional relationships and structures. Systems of musical notation and analysis. Musical practices of various times and styles.

1010su. FOUNDATIONS OF MUSIC. (2 cr; acceptance to music honors program or #)
Fundamentals of music theory and tone relations; introduction to music history and literature.

1021f,w. INTRODUCTION TO MUSIC. (5 cr, §3021) Sutton
Music in the repertory of our culture—forms and styles from 17th and 20th centuries. 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 non-music majors) Sutton
Similar to 1021, but more extensive.

3027. LYRIC SONG IN MEDIEVAL AND RENAISSANCE CULTURE. (4 cr; for non-music major) Cardamone-Jackson
Musical settings of secular lyric poetry in France and Italy; oral, popular, and courtly traditions; transcription, reception, aesthetic ideals; textual-musical analysis and criticism.

3028. SYMPHONIC MUSIC IN THE 18TH AND 19TH CENTURIES. (4 cr; for non-music major) 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 non-music major) Cardamone-Jackson
Aural perception of modern styles; cultural perspectives through primary source readings.

Band and Orchestral Instruments (See also Applied Music)

1330f,w,s. JAZZ IMPROVISATION. (2 cr per qtr [max 6 cr]; prereq audition, #) Bencriscutto
A progressive, systematic approach to the theory and practice of jazz improvisation, utilizing small groups including a rhythm section and one or more wind instruments.

1340f,w,s. JAZZ ENSEMBLE. (1 cr per qtr [max 6 cr]; prereq audition, #) Bencriscutto
A 20-member performing organization covering significant jazz compositions and arrangements written specifically for this medium.

Major Requirements and Course Descriptions

1410f,w,s. CONCERT BAND. (1 cr per qtr; prereq #) Bencriscutto, Kopetz
Wind ensemble and symphony bands perform standard and contemporary literature; concerts and tour appearances. Players from all colleges may participate.

1420f,w,s. ORCHESTRA. (1 cr per qtr; prereq #) Massmann
Symphony orchestra performs standard repertory and major works with University Chorus; concerts and tour appearances. Players from all colleges may participate.

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.

3440f,w,s. ENSEMBLE. (1 cr per qtr; prereq audition)
For description, see 1440.

5016. TRUMPET PEDAGOGY. (2 cr; prereq 12 cr of lower div trumpet lessons) Baldwin
Principles of trumpet pedagogy. Discussion of literature, history, and current teaching aids.

5330f,w,s. JAZZ IMPROVISATION. (2 cr per qtr [max 6 qtrs]; prereq 6 cr of 1330, #) Bencriscutto
For description, see 1330.

5340f,w,s. JAZZ ENSEMBLE. (1 cr per qtr [max 6 qtrs]; prereq audition, #)
Bencriscutto
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.

5364, 5365. CELLO PEDAGOGY. (2 cr per qtr; 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.

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.

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.

5390f,w,s. PERCUSSION ENSEMBLE. (1 cr per qtr; prereq #) Schultz
Practice and performance of standard and contemporary compositions for percussion ensembles in various combinations.

5391. HISTORY AND ACOUSTICS OF SINGLE REED INSTRUMENTS. (2 cr; prereq upper div standing in maj inst or #) Anderson
Clarinet and saxophone history and literature, mechanical design and development, acoustics, modern schools of performance.

5410f,w,s. CONCERT BAND. (1 cr per qtr; prereq audition) Bencriscutto, Kopetz
For description, see 1410.

5420f,w,s. ORCHESTRA. (1 cr per qtr; prereq audition) Massmann
For description, see 1420.

5440f,w,s. ENSEMBLE. (1 cr per qtr; prereq audition)
For description, see 1440.

5450f,w,s. COLLEGIUM MUSICUM. (1 cr per qtr; prereq audition) Cardamone-Jackson, McClary
Small ensembles of singers and instrumentalists; study and performance of early music.

5460f,w,s. CONTEMPORARY MUSIC ENSEMBLE. (2 cr per qtr; prereq audition) Stokes
Practice and performance of recent music for various combinations of vocal and instrumental ensembles.

Choral/Opera/Vocal Studies

(See also Applied Music)

1160f,w,s. VOICE: CLASS LESSONS. (2 cr per qtr [max 6 cr])
Fundamentals of vocal production—posture, respiration, phonation, articulation.

1430f,w,s. UNIVERSITY CHORUS. (1 cr per qtr; prereq #) Engebretson, Lancaster
Sec. 1, 2—University Chorus: Major symphonic works with Minnesota Orchestra, University Symphony Orchestra, University Concert Band.
Sec. 3—Concert Choir: Ensemble chosen from the University Chorus.
Sec. 4—Women's Chorus: Rehearsals and performances of standard material. Appearances at on- and off-campus functions.
Sec. 5—Men's Chorus: Standard materials as well as special arrangements. Appearances at on- and off-campus functions.

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.

5440f,w,s. ENSEMBLE. (1 cr per qtr; prereq audition)

For description, see 1440.

5370. VOCAL PERFORMANCE SEMINAR. (2 cr per qtr; prereq 18 cr in applied voice, #) Ware
Vocal performance in a seminar setting. Performance problems—stage deportment, interpretation, vocal technique, diction.

5371f-5372w-5373s. DICTION FOR SINGERS. (2 cr per qtr; prereq 12 cr of 1204 or #) Weller
International Phonetic Association alphabet; principles used in singing pronunciation of English, Italian, German, and French. 5371: English and Italian. 5372: German. 5373: French.

5375-5376. VOCAL PEDAGOGY. (4 cr per qtr; prereq 18 cr applied voice, MuEd 3431 or #)
Anatomical study of the vocal mechanism. Principles and techniques of vocal production. Teaching methods and application of knowledge.

5377. THE ADOLESCENT SINGING VOICE. (3 cr; prereq 3xxx clearance in voice for vocal majors or 6 cr of applied voice for non-vocal majors)
Principles of voice in teaching adolescent singers. Directed teaching, required readings, and study of relevant repertoire.

5378su. USE AND CARE OF THE HUMAN VOICE. (1 cr)
Physiology and anatomy of the human voice, psychology, acoustics, health care, therapeutic techniques.

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, #)
Preparation and conducting, with documentation, of an ensemble program.

5430f,w,s. UNIVERSITY CHORUS; CONCERT CHOIR; WOMEN'S CHORUS; MEN'S CHORUS; ST. PAUL CAMPUS CHORUS. (1 cr per qtr; prereq audition) Lancaster, Jorgenson
For description, see 1430.

5440f,w,s. ENSEMBLE. (1 cr per qtr; prereq audition)
For description, see 1440.

5450f,w,s. COLLEGIUM MUSICUM. (1 cr per qtr; prereq audition) Cardamone-Jackson, McClary
Small ensembles of singers and instrumentalists; study and performance of early music.

5460f,w,s. CONTEMPORARY MUSIC ENSEMBLE. (2 cr per qtr; prereq audition) Stokes
Practice and performance of recent music for various combinations of vocal and instrumental ensembles.

5467-5468-5469. STAGE MOVEMENT AND ACTING FOR SINGERS. (4 cr per qtr; prereq audition, #)
Basic techniques of stage movement and acting styles; application of these techniques to various forms of music theater.

5470f,w,s. OPERA WORKSHOP. (3 cr per qtr; prereq ability to sing arias satisfactorily, audition) Sutton
Preparation and performance of operatic arias and scenes; combined problems of musical and dramatic interpretation. A fully staged production.

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. (4 cr per qtr; prereq 12 cr in 1104 or 1204 or 1304 or #) Sutton
Literature and pedagogy; performance of songs from major and minor composers. Vocal techniques from major schools of singing as they relate to song performance.

Composition/Theory

1507su-1508su. THEORY REVIEW I-II. (3 cr per qtr; prereq #)
Melodic and harmonic structure.

1511f-1512w-1513s. EAR-TRAINING AND SIGHT-SINGING I. (1 cr per qtr; prereq music major or #)
Melodic, harmonic, and rhythmic dictation; sight-singing; clef-reading; musicianship drills.

1517su. EAR-TRAINING AND SIGHT-SINGING. (1 cr; prereq placement exam)
Aural skills: sight-singing, interval recognition, melodic and harmonic dictation, vocal improvisation.

1518su. EAR-TRAINING AND SIGHT-SINGING. (1 cr; prereq placement exam)
Aural skills: sight-singing, interval recognition, melodic and harmonic dictation.

1531. THEORY I: FOUNDATIONS OF TONAL THEORY. (3 cr; prereq music maj or #)
Two-part counterpoint (species approach); consonance and dissonance; melodic contours; review of music fundamentals.

1532. THEORY II: DIATONIC TONALITY. (3 cr; prereq 1531)
Writing and analysis of basic diatonic tonal structures. Basic harmonic and contrapuntal relationships.

1533. THEORY III: HARMONIC AND FORMAL PROCEDURES IN TONAL MUSIC. (3 cr; prereq 1532)
Writing and analysis of diatonic and basic chromatic tonal structures. Binary and ternary form.

3511-3512-3513. EAR-TRAINING AND SIGHT-SINGING II. (1 cr per qtr; prereq 1513 for 3511...3511 for 3512...3512 for 3513)
Further development of aural skills presented in 1513.

3531. THEORY IV: CHROMATIC TONAL THEORY. (3 cr; prereq 1533)
Chromatic tonal practices; expanded chordal vocabulary; voice leading and analysis.

Major Requirements and Course Descriptions

3532. THEORY V: THEORY OF EARLY MODERNISM, 1890-1945. (3 cr; prereq 3531)

Analysis of movements and shorter works in the diverse styles of the period 1890-1945.

3533. THEORY VI: THEORY OF ETHNIC AND NON-WESTERN MUSIC. (3 cr; prereq 3532)

Theoretical principles of diverse musical traditions (West African, Turkish, American Indian, Indonesian, Balkan, etc.); the "folk analysis"; composition and performance of these techniques and musical forms.

3534. THEORY VII: FORM AND STRUCTURE OF TONAL MUSIC. (3 cr; prereq 3531)

Analysis of form; three-part counterpoint; advanced exercises in figured bass and harmonization of melodies.

3535. THEORY VIII: THEORY OF RECENT MUSIC. (3 cr; prereq 3534)

Writing, analysis and performance of vocal and instrumental works in the diverse styles of the first half of the 20th century (e.g., polytonal, whole tone, quartal, and serial).

3550. COMPOSITION. (2 cr per qtr [12 cr max]; prereq 3535, #)

Original works in various forms. Techniques and styles of composition; development of original approaches.

3791. INTRODUCTION TO ELECTRONIC MUSIC. (4 cr; prereq 4 cr in music or #) Ultan, Stokes

Musical literature to which electronic materials contribute. Listening, discussion, and reading. Exercises in use of equipment.

5511. ADVANCED EAR-TRAINING I. (3 cr; prereq 3513 or #) Fetler

Dictation of melodic, harmonic, and rhythmic materials in a variety of styles. Contemporary sonorities.

5512. ADVANCED EAR-TRAINING II. (3 cr; prereq 3513 or #) Fetler

Dictation of melodic, harmonic, rhythmic, and contrapuntal materials. Twentieth-century tone combinations, meters, and rhythms. Tonal, polytonal, and atonal exercises. Tonal memory.

5532. ANALYSIS OF MUSIC 1890-1945. (3 cr; prereq 3535) Lubet

Representative masterworks of the 20th century.

5533. ANALYSIS OF MUSIC 1945 TO PRESENT. (3 cr; prereq 3535) Lubet

Procedures and techniques of analysis applied to music composed since ca. 1945.

5540f,w,s. JAZZ COMPOSITION AND ARRANGING. (2 cr; prereq 3533, #) Benciscutto

Original creative writing in the jazz style or with strong jazz influence for any medium of musical expression, guided in individual sessions with instructor.

5541f-5542w-5543s. ADVANCED COUNTERPOINT. (2 cr per qtr; prereq #; offered alt yrs) Fetler

Practice in writing three- and four-voice fugues; contrapuntal devices and problems; polyphonic works of periods from *ars nova* to the present day.

5550. COMPOSITION. (2 cr per qtr [12 cr max]; prereq 3535, #) Argento, Fetler, Ultan, Stokes
Original works in various forms.

5560. ELECTRONIC MUSIC LABORATORY. (2 cr per qtr; prereq 3791 or #) Stokes, Ultan

Electronic musical techniques and compositional methods. Performance in combination with instruments and voices.

5561f-5562w-5563s. ORCHESTRATION. (2 cr per qtr; prereq 3533) Argento

Scoring instruments for ensemble combinations and full orchestra.

5564. BAND ARRANGING. (4 cr; prereq 3533, 5563 or MuEd 3516 or #) Benciscutto, Schultz

Scoring techniques for wind and percussion instruments. Scoring for band. Creative arrangements for marching or concert band.

5571. INTRODUCTION TO SCHENKERIAN ANALYSIS. (4 cr; prereq 3534; 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 3513, 3534, #; 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.

5971. MUSIC TRANSCRIPTION FOR WINDS. (2 cr; prereq 3503) Baldwin

Transcription of three works with score and parts copied in ink. Principles of music manuscript and examination of examples of transcription.

Keyboard and Fretted Instruments

(See also Applied Music)

1051, 1052, 1053. PIANO CLASS FOR NON-MUSIC MAJORS. (2 cr per qtr; prereq 1051 for 1052 and 1051 and 1052 for 1053 or #) Shockley

Basic beginning keyboard skills of sight-reading, harmonization, transposition, and improvisation for non-music majors.

1151f-1152w-1153s. PIANO: CLASS LESSONS. (2 cr per qtr; prereq music major) Shockley

Keyboard skills in harmonization, improvisation, sight-reading, accompaniment, repertory, technique. Group learning.

1171f-1172w-1173s. GUITAR: CLASS LESSONS. (2 cr per qtr)

Fundamentals and progressive development of skills. *1171*: Strumming techniques, harmonizations in basic keys. *1172*: Advanced strumming techniques, bass runs, finger-picking strums. *1173*: Melodic techniques, advanced harmonizations. (Student must furnish own guitar.)

1351, 1352, 1353. JAZZ CLASS PIANO. (2 cr per qtr; prereq 1153 or #) Buckner
Keyboard skill development in chord-style symbology, reading chord progressions, translating chord symbols into formula voicings, expanded harmonies, aural development, jazz style "comping."

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 TRAINING. (2 cr per qtr; primarily for piano and organ majors; prereq 1533 and 1513)
Keyboard harmony; realization of figured basses; score reading; transposition; improvisation.

3440f,w,s. ENSEMBLE. (1 cr per qtr; prereq audition)
For description, see 1440.

5351f-5352w-5353s. PIANO PEDAGOGY I. (2 cr per qtr; prereq 12 cr in 1101 or 1201 or 1301 or 1151-1152-1153 or #; offered alt yrs) Shockley
Demonstration and discussion of group piano instruction at the elementary level. Literature appropriate to conceptual learning through the discovery approach.

5354f-5355w-5356s. PIANO PEDAGOGY II. (2 cr per qtr; prereq 12 cr in 1101 or 1201 or 1301 or 1151-1152-1153 or #; offered alt yrs) Shockley
Piano pedagogy. Teaching materials; application of principles and techniques in a directed teaching setting.

5357f, 5358w, 5359s. GRADUATE PIANO SEMINAR. (2 cr per qtr; prereq #; offered alt yrs) Freed, McNab
Recognition and study of piano instruction and performance problems. Terminology, repertory, evolution of piano construction, performance practice from baroque to contemporary literature.

5440f,w,s. ENSEMBLE. (1 cr per qtr; prereq audition)
For description, see 1440.

5450f,w,s. COLLEGIUM MUSICUM. (1 cr per qtr; prereq audition) Cardamone-Jackson, McClary
Small ensembles of singers and instrumentalists; study and performance of early music.

5451. HYMNOLOGY. (2 cr; prereq 1606, 3533, #) Billmeyer
Study of hymns of various historical periods and denominations and related literature of the church. Modern hymnals of all major church denominations.

5452. SERVICE PLAYING AND IMPROVISATION. (2 cr; prereq 3533, #) Billmeyer
Hymn-playing at the organ. Arranging anthem accompaniments for the organ and conducting from the console. Techniques for improvisation at the organ.

5460f,w,s. CONTEMPORARY MUSIC ENSEMBLE. (2 cr per qtr; prereq audition) Stokes
Practice and performance of recent music for various combinations of vocal and instrumental ensembles.

5521f, 5522w, 5523s. KEYBOARD HARMONY. (2 cr per qtr; primarily for piano and organ majors; prereq 3533, sr or grad student)
Diatonic and chromatic harmony at the piano. Realization of figured bass music of the 17th and 18th centuries. Performance of choral, orchestral, and chamber music of classical and early romantic periods from open score, using all clefs.

5744f, 5745w, 5746s. PIANO LITERATURE. (2 cr per qtr; prereq 12 cr in 1101 or 1201 or 1301 or #; offered alt yrs)
History of keyboard literature for piano performances from end of 16th century to present. Performance illustrations, recordings.

5747, 5748, 5749. ORGAN LITERATURE. (2 cr per qtr; prereq 1606, 3533, jr, sr, or grad in organ, church music or musicology, 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 Therapy

See the *College of Education Bulletin* for course offerings.

Musiology/Ethnomusicology

1602w. MUSIC AND SOCIETY. (3 cr; prereq 1531 or #) Kagan
Music and its cultural context in rural, urban, and tribal societies.

1603s-1604f-1605w-1606s. HISTORY OF WESTERN MUSIC. (4/3/4/4 cr per qtr; prereq 1532) Laudon, McClary
The development of musical styles and genres. *1603:* Romanesque, Gothic, and Renaissance eras. *1604:* Baroque era. *1605:* Classical-romantic era. *1606:* 20th century.

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 an understanding of human musical expressions.

3708. AFRO-AMERICAN MUSIC THROUGH THE 1920s. (4 cr, §Afro 3105) Southall
Musical contributions of black Americans from the colonial period through the Harlem Renaissance.

3709. THE CARIBBEAN: AFRICAN MUSIC RECEPTIONS. (4 cr, §Afro 3301) Southall
Transmission and links between the musical culture of Africa, and the French, English, and Spanish speaking peoples of the Caribbean.

Major Requirements and Course Descriptions

3807. MUSIC OF SOUTHEAST ASIA AND PACIFIC CULTURES. (4 cr) Kagan

Style, form, and theory of village and courtly institutions in Indonesia and Southeast Asia; variety of musical practices and behavior in Australia and Pacific cultures.

3808. MUSIC OF EAST ASIA. (4 cr) 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 student, 1606, 3533 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.

5601f-5602w-5603s. HISTORY OF OPERA. (3 cr

per qtr; prereq 9 cr in history of music, art, theatre or European history from 1600 or #) Argento

Origins of opera; development as a musicodramatic form through analysis of libretto and music of representative masterpieces. *5601*: Later Renaissance, baroque, classical. *5602*: Romantic. *5603*: Contemporary periods.

5634f. BAROQUE VOCAL MUSIC. (4 cr; prereq

1606; offered alt yrs) McClary
Dramatic conventions in opera, oratorio, cantata.

5635w. BAROQUE INSTRUMENTAL MUSIC.

(4 cr; prereq 1606; offered alt yrs) McClary
Transition from modality to tonality and development of instrumental genres; sacred music in Italy and Germany.

5637f, 5638w, 5639s. MUSIC IN GALANT AND CLASSIC PERIODS. (4 cr per qtr; prereq 1606; offered alt yrs)

5637: Learned and galant styles, the symphony, Haydn. *5638*: Concerto, opera, Mozart. *5639*: Keyboard and chamber music, Beethoven.

5641f. ROMANTIC CONCERT MUSIC. (4 cr; prereq 1606 or #; offered alt yrs)

Romanticism, concert music, and the orchestral concert.

5642w. ROMANTIC SOLO MUSIC. (4 cr; prereq 1606 or #; offered alt yrs)

The artist, solo music and solo concerts.

5643s. ROMANTIC CHAMBER MUSIC. (4 cr; prereq 1606 or #; offered alt yrs)

Chamber music, music theory, and education.

5662. HEINRICH SCHÜTZ: LIFE AND WORKS.

(4 cr; prereq 8 cr in music or art history or German literature or political history to 1700 or #; offered when feasible) McClary
Political events in 17th-century Germany, Europe; Protestant hymn, psalm literature. Their musical elaborations in works of Schütz. Madrigals, monodies, sacred concerti and cantatas, passions.

5666. STRAVINSKY. (4 cr; prereq 12 cr in music history, 3535) 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 1606, 3533; 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.

5708. BLACK COMPOSERS: CONTRIBUTIONS TO WESTERN MUSIC AND CULTURE. (4 cr,

§Afro 5201) Southall
Musical achievements of black Americans in notated/classical music.

5757, 5758. HISTORY OF THE SYMPHONY. (4 cr

per qtr; prereq 1606, 3533) McClary
The symphony from its beginnings to the present. Critical examination of representative compositions, readings from relevant primary and secondary source materials. *5757*: From Pergolesi to Liszt. *5758*: From 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. (5 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 MUSICAL RE-

SEARCH. (4 cr; prereq 1606 or #) Holm
Introduction to the use of basic bibliographies, reference works, periodicals and historical editions; techniques for preparing a bibliography on a given topic or course-related topic.

5861. INTRODUCTION TO ETHNOMUSICOLOGY. (5 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.

Directed Studies

3970f, w.s. DIRECTED STUDIES. (1-15 cr per qtr; prereq #, Δ) Staff
Guided individual reading or study.

3980f, w.s. DIRECTED TEACHING. (1-4 cr per qtr; prereq #, Δ) Staff

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 eight modes: principal, major, secondary required, secondary elective, principal beyond requirement, major beyond requirement, minor, and elective. Each mode is offered at the 1xxx (introductory), 3xxx (intermediate) and 8xxx (graduate) levels. 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, and major beyond requirement modes. See the current *Class Schedule* for the fee schedule.

Credits and prerequisites for applied music courses are as follows:

1101 to 1324: (2 or 4 cr; prereq audition, Δ)

1401 to 1724: (2 or 4 cr per qtr [12 cr max]; prereq music major, Δ)

3101 to 3324: (2 or 4 cr; prereq 12 cr in corresponding 1xxx-level course, qualifying exam, Δ)

3401 to 3724: (2 or 4 cr per qtr [12 cr max]; prereq music major, Δ)

3801 to 3823: (2 or 4 cr per qtr; prereq audition, Δ)

5101 to 5125: (2 or 4 cr per qtr; prereq audition, Δ)

8101 to 8324: (2 or 4 cr; prereq audition, Δ)

8401 to 8724: (2 or 4 cr per qtr [12 cr max]; prereq music major, Δ)

Applied music courses in the various modes offered at the undergraduate level are listed on page 192.

Naval Science

See Reserve Officers' Training Corps.

Norwegian

See Scandinavian Studies.

Persian

See South and Southwest Asian Studies.

Philosophy (Phil)

Staff—Chair, Marcia Eaton, 399 Ford Hall; **Director of Graduate Studies,** Burnham Terrell, 335 Ford Hall; **Director of Undergraduate Studies,** H. E. Mason, 257 Ford Hall

Professors: Dahl, Eaton, Gunderson, Hanson, Hopkins, Philip Kitcher, Lewis, Mason, Sartorius, Savage, Terrell, Wallace
Associate Professors: Anderson, Dolan, Patricia Kitcher, Peterson, Root, Scheman

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, 3303, 3304, 3305, and 5xxx-level ethics and political philosophy courses of value. Logic (1001) and philosophy of science (3631) may be of interest to science majors. Courses in aesthetics, philosophy of language, and history of philosophy may be of interest to nonspecialists.

B.A. Major Sequence

Required Preparatory Courses—Background or introductory work to prepare for major program
1001, 1002 or 1102

Major Requirements and Course Descriptions

Instrument	Principal	Major	Secondary Required	Secondary Elective	Principal Beyond Requirement	Major Beyond Requirement	Minor
Piano	1201	1301	1401	1501	1601	1701	
Harpsichord	1202	1302	1402	1502	1602	1702	
Organ	1203	1303	1403	1503	1603	1703	
Voice	1204	1304	1404	1504	1604	1704	
Violin	1205	1305	1405	1505	1605	1705	
Viola	1206	1306	1406	1506	1606	1706	
Cello	1207	1307	1407	1507	1607	1707	
Double Bass	1208	1308	1408	1508	1608	1708	
Flute	1209	1309	1409	1509	1609	1709	
Oboe	1211	1311	1411	1511	1611	1711	
Clarinet	1212	1312	1412	1512	1612	1712	
Saxophone	1213	1313	1413	1513	1613	1713	
Bassoon	1214	1314	1414	1514	1614	1714	
French Horn	1215	1315	1415	1515	1615	1715	
Trumpet	1216	1316	1416	1516	1616	1716	
Trombone	1217	1317	1417	1517	1617	1717	
Baritone	1218	1318	1418	1518	1618	1718	
Tuba	1219	1319	1419	1519	1619	1719	
Percussion	1221	1321	1421	1521	1621	1721	
Harp	1222	1322	1422	1522	1622	1722	
Guitar	1223	1323	1423	1523	1623	1723	
Piano	3201	3301	3401	3501	3601	3701	3801
Harpsichord	3202	3302	3402	3502	3602	3702	3802
Organ	3203	3303	3403	3503	3603	3703	3803
Voice	3204	3304	3404	3504	3604	3704	3804
Violin	3205	3305	3405	3505	3605	3705	3805
Viola	3206	3306	3406	3506	3606	3706	3806
Cello	3207	3307	3407	3507	3607	3707	3807
Double Bass	3208	3308	3408	3508	3608	3708	3808
Flute	3209	3309	3409	3509	3609	3709	3809
Oboe	3211	3311	3411	3511	3611	3711	3811
Clarinet	3212	3312	3412	3512	3612	3712	3812
Saxophone	3213	3313	3413	3513	3613	3713	3813
Bassoon	3214	3314	3414	3514	3614	3714	3814
French Horn	3215	3315	3415	3515	3615	3715	3815
Trumpet	3216	3316	3416	3516	3616	3716	3816
Trombone	3217	3317	3417	3517	3617	3717	3817
Baritone	3218	3318	3418	3518	3618	3718	3818
Tuba	3219	3319	3419	3519	3619	3719	3819
Percussion	3221	3321	3421	3521	3621	3721	3821
Harp	3222	3322	3422	3522	3622	3722	3822
Guitar	3223	3323	3423	3523	3623	3723	3823
Piano	1101	3101					
Harpsichord	1102	3102					
Organ	1103	3103					
Voice	1104	3104					
Violin	1105	3105					
Viola	1106	3106					
Cello	1107	3107					
Double Bass	1108	3108					
Flute	1109	3109					
Oboe	1111	3111					
Clarinet	1112	3112					
Saxophone	1113	3113					
Bassoon	1114	3114					
French Horn	1115	3115					
Trumpet	1116	3116					
Trombone	1117	3117					
Baritone	1118	3118					
Tuba	1119	3119					
Percussion	1121	3121					
Harp	1122	3122					
Guitar	1123	3123					

Major Requirements—at least nine 3xxx or 5xxx-level philosophy courses including 3001, 3003, either 3105 or 5105 or 5601, and either 3311 or 5311 or 5312 or 5321 or 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.

Minor Sequence

Minor Requirements—Minimum of 20 3xxx-5xxx cr in philosophy

Course selections must be approved by a philosophy department faculty member.

1001f,w,s. INTRODUCTION TO LOGIC. (5 cr) Staff
Application of formal techniques for evaluating arguments.

1001H. HONORS COURSE: INTRODUCTION TO LOGIC. (5 cr)
For description, see 1001.

1002f,w,s. INTRODUCTION TO PHILOSOPHY. (5 cr) Staff
Problems, principal methods and schools of philosophy; historical and contemporary views.

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, §1103) 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.

1004H. HONORS COURSE: INTRODUCTION TO POLITICAL PHILOSOPHY. (5 cr; prereq honors regis or #) Staff
For description, see 1004.

1005. INTRODUCTION TO INDUCTIVE AND SCIENTIFIC REASONING. (5 cr) Staff
Techniques for evaluation of theories and of causal and statistical hypotheses encountered both in science and in everyday life; methods of rational decision making. Emphasis on learning to deal rationally with scientific and allegedly scientific claims.

1103. ETHICS: EMPHASIS ON WRITING. (5 cr, §1003) Dolan, Peterson
Introduction to study of conduct and value with equal emphasis on writing and reading about philosophical problems and theories.

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. HONORS COURSE: GENERAL HISTORY OF WESTERN PHILOSOPHY. (5 cr per qtr; prereq honors regis or #) Staff
For description, see 3001, 3002, 3003.

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.

3105. INTRODUCTION TO THE THEORY OF KNOWLEDGE. (4 cr; prereq 1001 or 3201 or #) Anderson, Dolan, Savage
Theories and problems concerning evidence, belief, and knowledge.

3231. INTRODUCTION TO THE PHILOSOPHY OF LANGUAGE. (4 cr; prereq 1001 or 3201 or 5201 or #) Anderson, Dolan, Mason, Peterson, Root
Elementary issues concerning the nature of reference, linguistic convention, linguistic truth, translation, synonymy or the relation between language and thought.

3234. PHILOSOPHY OF FEMINISM. (4 cr; prereq #) Scheman
Theories in ethics, political and social philosophy, metaphysics, epistemology, philosophy of mind, or aesthetics viewed in light of emerging feminist criticism.

3302. MORAL PROBLEMS OF CONTEMPORARY SOCIETY. (5 cr) Dahl, Dolan, Mason, Sartorius, Scheman, Terrell
Selected problems of current interest.

3302H. MORAL PROBLEMS IN CONTEMPORARY SOCIETY. (5 cr; prereq honors regis or #) Staff
For description, see 3302.

3304. LAW AND MORALITY. (5 cr) Staff
Human personhood, legal and moral rights, and self-respect issues studied through use of major court decisions and philosophical essays. Likely topics: privacy, legal paternalism, morals enforcement, abortion, punishment, civil disobedience.

3304H. HONORS COURSE: LAW AND MORALITY. (5 cr)
For description, see 3304.

Major Requirements and Course Descriptions

- 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.
- 3306. ETHICS AND ENGINEERING.** (5 cr) Dahl
Ethical problems that arise in the practice of engineering, e.g., risk assessment, technology vs. public safety, conflicts of interest, whistle blowing, professionalism.
- 3311. INTRODUCTION TO ETHICAL THEORY.** (4 cr)
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.
- 3601. SCIENTIFIC THOUGHT.** (4 cr; prereq 1002, two natural science courses or completion of Group B distribution requirement) Philip Kitcher
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 #) Patricia Kitcher, 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. CONTEMPORARY EXISTENTIALISM.** (4 cr; prereq 3003 or 3004 or 5054 or #) Hopkins, Mason, Lewis
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 and 8 cr in 3xxx-5xxx philosophy courses) Staff
Topics of contemporary interest, varying from quarter to quarter.
- 3910. MAJOR SEMINAR.** (4 cr; prereq philosophy major or #)
Writing projects on varying subjects.
- 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 or better in previous work)
Individual assignments carried out under faculty direction.
- 5003. AMERICAN PHILOSOPHY.** (4 cr; prereq 1002 or 1 qtr history of philosophy or #; offered when feasible)
Selected American philosophers such as Edwards, Peirce, James, Dewey, Lewis.
- 5004. SOCRATIC DIALOGUES.** (4 cr; prereq 3001 or #) 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 #)
Selected topics in writings of Augustine, Anselm, Aquinas, Scotus, and Ockham.
- 5034. DESCARTES.** (4 cr; prereq 3003 or #) Patricia Kitcher, Lewis, Root
Philosophical works.
- 5035. SPINOZA.** (4 cr; prereq 3003 or #; offered when feasible) Lewis, Scheman
The Ethics.
- 5041. LOCKE.** (4 cr; prereq 3003 or #) Gunderson, Patricia Kitcher, Lewis, Terrell
The Essay Concerning Human Understanding.
- 5042. BERKELEY.** (4 cr; prereq 3003 or #) Patricia Kitcher, Lewis, Terrell
Philosophical works.
- 5043. HUME.** (4 cr; prereq 3003 or #) Patricia Kitcher, Terrell
Treatise and Inquiry.
- 5046. KANT.** (4 cr; prereq 3003 or 3004 or #) Dahl, Patricia Kitcher, Mason
Passages from major works.
- 5052. BRENTANO.** (4 cr; prereq 3003 or #; offered when feasible) Terrell
Philosophy of Franz Brentano; significance in background of contemporary philosophy.
- 5054. KIERKEGAARD.** (4 cr; prereq 1 qtr history of philosophy or #)
Major philosophical works.

5055. SOCIAL AND POLITICAL PHILOSOPHY OF KARL MARX. (4 cr; prereq 3004 or #) Hopkins
 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
 Philosophical theories concerning the nature of reality.

5105. THEORY OF KNOWLEDGE. (4 cr; prereq 1001 or #) Dolan, Savage
 Problems and concepts involved in the explanation and justification of claims to knowledge.

5201. SYMBOLIC LOGIC I. (5 cr; prereq 1001 or #) Dahl, Dolan, Hanson, Philip Kitcher
 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, Philip Kitcher
 Further study of first-order predicate logic; identity, axiomatic development. Various metatheorems; soundness, consistency, and completeness.

5203. SYMBOLIC LOGIC III. (4 cr; prereq 5202) Anderson, Hanson, Philip Kitcher
 Axiomatic development of first-order predicate logic and first-order number theory; proofs of limitative results such as undecidability of predicate logic and incompleteness of number theory. Significance of limitative results.

5211. NONCLASSICAL LOGICS. (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; problem of formalizing the notion of entailment.

5221. PHILOSOPHY OF LOGIC. (4 cr; prereq 5202 or Math 5162 or #) Anderson, Hanson, Philip Kitcher
 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, Philip Kitcher
 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
 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
 Detailed study of topics surveyed in 5231 or other topics central to the philosophy of language.

5301. HISTORY OF ETHICS: BRITISH MORALISTS. (4 cr; prereq 1003 or 1 qtr history of philosophy or #) Terrell
 Ethical theory in Great Britain from 17th through 19th centuries.

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 #) Dahl, Mason, Sartorius
 Representative theories on the nature and justification of moral judgments.

5312. FOUNDATIONS OF ETHICS. (4 cr; prereq 1003 or #) Dahl, Mason, Scheman
 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 #) Mason, Sartorius
 Philosophical accounts of the concept and principles of justice.

5322. DISTRIBUTIVE JUSTICE AND INTERNATIONAL RELATIONS. (4 cr) Sartorius
 Inequities within less developed countries and dependency relations between such countries and developed nations (especially former colonial powers) examined in light of neo-Marxian, utilitarian, contractarian, and libertarian theories of distributive justice.

5324. ETHICS AND EDUCATION. (2-4 cr; prereq 8 cr in philosophy of education or #) Terrell
 Recent studies relating ethical theory and philosophy of education; theories of moral development and moral education.

5414. POLITICAL PHILOSOPHY. (4 cr; prereq 1004 or #) Dolan, Sartorius
 Central concepts and principal theories of political philosophy.

5415. PHILOSOPHY OF LAW. (4 cr; prereq 1003 or 1004 or 3302 or social science major or #) Sartorius
 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.

Major Requirements and Course Descriptions

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; prereq 8 cr in philosophy) Anderson, Hopkins

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 #)

Principles of scientific method; contemporary approaches to scientific inference.

5602. PHILOSOPHY OF SCIENCE: THEORY AND EXPLANATION. (4 cr; prereq 3601 or 5601 or #) Philip Kitcher, Savage

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 #) Philip Kitcher

Major contemporary views about the growth of scientific knowledge.

5605. PHILOSOPHY OF SCIENCE: TIME AND SPACE. (4 cr; prereq courses in philosophy or natural sciences) Earman

Major philosophical problems concerning the nature and structure of space, time, and space-time.

5606. PHILOSOPHY OF SCIENCE: PROBLEMS OF THE BIOLOGICAL SCIENCES. (4 cr; prereq one course in philosophy of science or biology) Philip Kitcher

Major philosophical questions that arise in connection with biology: the structure and status of evolutionary theory, reductionism in biology, the legitimacy of teleology, the nature of species, the relation of biology to the social sciences.

5607. PHILOSOPHY OF SCIENCE: CURRENT ISSUES IN THE PHILOSOPHY OF PSYCHOLOGY. (4 cr; prereq Psy 3051 or 5011 or Phil 3607 or 5601 or #) Patricia Kitcher, Savage

Problems and prospects of recent approaches to the study of mind.

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.

5609. PHILOSOPHY OF SCIENCE: PHILOSOPHICAL ISSUES OF PERCEPTION AND COGNITION. (4 cr; prereq 1002 and either 3601 or 3607 or 5105 or 5601 or 5607 or Psy 3031 or 3051 or 5011 or 5031 or #) Savage

Philosophical implications of contemporary theories of perception and perceptual thinking.

5611. PHILOSOPHY OF THE SOCIAL SCIENCES I. (4 cr; prereq 12 cr in philosophy or social sciences or #) Root, Sartorius, Scheman

Criteria for describing and explaining human actions; problems of objectivity, reduction, freedom.

5612. PHILOSOPHY OF THE SOCIAL SCIENCES II. (4 cr; 5611 recommended; offered when feasible) Scheman

Intensive study of certain topics introduced in 5611.

5615. MINDS, BODIES, AND MACHINES. (4 cr; prereq 4 cr in philosophy or #) Gunderson, Patricia Kitcher

Philosophical relevance of cybernetics, artificial intelligence, and computer simulation.

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 4 3xxx-5xxx cr in philosophy or #) Staff

Philosophical problems of contemporary interest. Specific topics announced in *Class Schedule*.

5781. CONTEMPORARY 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, Terrell

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, Charles Campbell, 145 Physics; *Director of Graduate Studies*, Marvin L. Marshak, 416 Physics; *Director of Undergraduate Studies*, Robert O. Pepin, 148 Physics; *Administrator*, David Holets, 145 Physics

Regents' Professor Emeritus: Nier
Professors: Bayman, Blair, Broadhurst, Cahill, Campbell, Courant, Dehnard, Ellis, P. Freier, Gasiorowicz, Giese, Goldman, Greenlees, Halley, Hintz, Hobbie, Johnson, Kellogg, Mantis, Marquit, Marshak, Mauersberger, Pepin, Peterson, Ruddick, Shapiro, Stuewer, Suura, Tang, Waddington, Walsh, Weyhmann, Winckler, Zabolitzky, Zimmermann

Associate Professors: Heller, Huang, Jones, Kapusta, Rudaz, Valls
Assistant Professors: Dahlberg, Dasgupta, Hosotani, Lysak, Olive, Shupe

Adjunct Faculty—Erickson (Augsburg College)

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, secondary school teaching, or professional study in law, business, or medicine. Information about requirements for students preparing for majors in physical science or for minors in physics through the College of Education is presented in the *College of Education Bulletin*. Courses for junior high school and high school physics teachers include 5954 and additional courses listed in the *Continuing Education and Extension Bulletin*.

Prerequisites for any physics course may be waived with permission of the department or instructor. Students who have earned credit in 1001-1002, 1041-1042, 1061, 1104-1105-1106, 1271-1281-1291, 1311-1321-1331-1341 or 1411-1421-1431-1441 normally will not receive credit for corresponding courses in other physics sequences. Credit for non-laboratory physics courses may be earned through special examination.

General Education—Courses not requiring a calculus background are 1001 with lab 1005, 1002, 1041-1042 with labs 1045-1046, 1061 with lab 1065, 1071 with lab 1075, 3801, 5091. Premed courses are 1104-1105-1106 with labs 1107-1108-1109. Courses requiring calculus are 1271-1281-1291 and 1311-1321-1331-

1341, both with labs 1275-1285-1295, and 1411-1421-1431-1441 with labs 1425-1435-1445. In order to satisfy the group B laboratory requirement by taking one of the above courses, you must complete the laboratory course associated with the lecture course.

B.A. Major Sequence

Required Preparatory Courses—1271-1281-1291 or 1311-1321-1331-1341, 1275-1285-1295, or 1411-1421-1431-1441, 1425-1435-1445; Math 1211-1221-1231 or 1511-1521-1531 or 1611-1621 or equiv

Major Requirements—3011, 3511-3512-3513, 3015 or 3515; Math 3511-3521-3531 or 3211-3212-3213 or equiv; 3201 or 5201, and at least 20 cr of 5xxx-level physics courses selected from 5021-5022, 5023-5024, 5101, 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 course work in a 5xxx-level physics course

Majors are urged to take additional 5xxx physics, mathematics, history of science, or computer science courses. If you are planning to pursue graduate work in physics, you are advised to take the honors requirement courses listed below as well as 5102, 5202, and one 5xxx-level mathematics course.

Honors Requirements—3011, 3511-3512-3513, 3015 or 3515; Math 3511-3521-3531; 5021-5022, 5023-5024, 5101, 5121-5122, 5201; major project requirement as stated above

1001f,w,s. THE PHYSICAL WORLD. (4 cr [0 cr for IT students], §any other physics courses except 1061; 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.

1002s. THE PHYSICAL WORLD IN TRANSITION. (4 cr [0 cr for IT students], §any other introductory physics courses except 1001, 1061; prereq 1001; 4 class hrs per wk)

Principles underlying recent discoveries in physics; their applications and potential applications to modern technology, and problems that may arise with these applications. Nuclear energy, radiology, lasers, solid-state physics, microelectronics, computers, superfluids and superconductors, robots, space physics, cosmology.

Major Requirements and Course Descriptions

1005f, w, s. PHYSICS LABORATORY. (1 cr [0 cr for IT students]; S-N only; prereq 1001 or ¶1001; 2 lab hrs per wk)

Laboratory experiments offered with 1001.

1041f, w, s, su.-1042w, s, su. INTRODUCTORY PHYSICS. (4 cr per qtr [0 cr for IT students except architecture, pre-architecture, environmental design students], §any other introductory physics courses; prereq high school algebra and plane geometry; 4 class hrs per wk)

Lectures and problems sessions. Primarily for students interested in topics useful in technical areas. Mechanics, fluids and gases, heat, waves, electricity and magnetism, light, optical instruments, atoms and spectra, nuclei, radioactivity. Associated labs are 1045-1046.

1045f, w, s, su.-1046w, s, su. INTRODUCTORY PHYSICS LABORATORY. (1 cr per qtr [0 cr for IT students except architecture, pre-architecture, environmental design students]; S-N only; prereq 1041 or ¶1041 for 1045...1042 or ¶1042 for 1046; 2 lab hrs per wk)

1061. PHYSICS OF HUMAN MOTION. (4 cr [0 cr for IT students]; prereq ¶1065, 1 yr high school algebra; 3 lect-discussion hrs per wk)
Classical mechanics applied to motion of human bodies in work, athletics, dance. Physics of muscles. Eight labs, some in gym. Associated lab is 1065.

1065. HUMAN MOTION LABORATORY. (1 cr [0 cr for IT students]; S-N only; prereq ¶1061; 2 lab hrs per wk)

Human motion experiments offered with 1061.

1071f. INTRODUCTORY METEOROLOGY. (4 cr; prereq high school algebra; 4 lect hrs per wk)
Physics of atmospheric processes. Clouds, fronts, and cyclones. Weather forecasting. Human influence on the atmosphere. Associated lab is 1075.

1075f. INTRODUCTORY METEOROLOGY LABORATORY. (1 cr; S-N only; prereq 1071 or ¶1071; 2 lab hrs per wk)
Field experiments offered with 1071.

1104f-1105w-1106s. GENERAL PHYSICS. (4 cr per qtr [0 cr for IT students]; primarily for premed and biological science students; prereq Math 1142 and high school trigonometry or Math 1008 for 1104; 4 lect, 1 quiz hrs per wk)

1104: Mechanics. *1105*: Heat and electricity. *1106*: Magnetism, sound, light, modern physics. Associated labs are 1107-1108-1109.

1107f-1108w-1109s. GENERAL PHYSICS LABORATORY. (1 cr per qtr [0 cr for IT students]; S-N only; prereq 1104-1105-1106 or ¶1104-1105-1106; 2 lab hrs per wk)
Laboratory exercises in general physics offered with 1104-1105-1106.

1271f, w, s, su-1281f, w, s, su-1291f, w, s, su. GENERAL PHYSICS. (4 cr per qtr; prereq completion of or concurrent regis in Math 1221 or 1521 or 1621 or equiv for 1271...completion of or concurrent regis in Math 1231 or 1531 or 1621 or equiv for 1281; may be taken with or without labs 1275-1285-1295; 4 lect, 1 quiz hrs per wk)

Calculus-level general physics course. *1271*: Mechanics. *1281*: Heat, electricity. *1291*: Magnetism, optics.

1275f, w, s, su-1285f, w, s, su-1295f, w, s, su. GENERAL PHYSICS LABORATORY. (1 cr per qtr; prereq 1271 or ¶1271 or 1311 or ¶1311 for 1275, 1281 or ¶1281 or 1331 or ¶1331 for 1285, 1291 or ¶1291 or 1341 or ¶1341 for 1295; 2 lab hrs per wk; S-N only)

Laboratory exercises offered with 1271-1281-1291 or 1311-1321-1331-1341. 1275 may be taken with either 1311 or 1321.

1311f-1321w-1331s-1341f. COMPREHENSIVE INTRODUCTORY PHYSICS WITH CALCULUS. (4 cr per qtr; prereq completion of or concurrent regis in Math 1211 or 1511 or 1611 or equiv for 1311...1311 and completion of or concurrent regis in Math 1221 or 1521 or 1621 or equiv for 1321...1321 and completion of or concurrent regis in Math 1231 or 1531 or 1621 or equiv for 1331...1331 for 1341; may be taken with or without accompanying lab 1275 for 1311 or 1321, 1285 for 1331, 1295 for 1341; 4 lect hrs per wk)

Comprehensive calculus-level general physics course. *1311*: Mechanics of particles. *1321*: Mechanics of extended bodies, fluids, thermodynamics. *1331*: Electricity and magnetism. *1341*: Electromagnetic waves, light.

1411f-1421w-1431s-1441f. HONORS PHYSICS I-II-III-IV. (4 cr per qtr, §1271-1281-1291, §1311-1321-1331-1341; prereq selection for IT Honors curriculum or consent of IT Honors Office, ¶1425 with 1421, ¶1435 with 1431, §1445 with 1441; 4 lect and 1 recitation hrs per wk)

Comprehensive calculus-level general physics course for honors students. Mechanics of particles, mechanics of extended bodies, waves, fluids, thermodynamics, electricity and magnetism, electromagnetic waves, light and optics, modern physics.

1425w-1435s-1445f. HONORS PHYSICS LABORATORY. (1 cr per qtr, §1275-1285-1295; prereq selection for IT Honors curriculum or consent of IT Honors Office, ¶1421 with 1425, ¶1431 with 1435, ¶1441 with 1445; 2 lab hrs per wk; S-N only)
Laboratory exercises offered with 1421-1431-1441.

3011w. OSCILLATIONS. (4 cr; prereq 1291 or 1341 or 1441, Math 3212 or ¶3212 or equiv; 3 lect and 1 problem hrs per wk)

Physical and mathematical study of harmonic oscillator. Transient behavior; resonance; impedance; mechanical and electrical examples; coupled systems; traveling and standing waves in one dimension; Fourier series, interference.

3015s. LABORATORY IN OSCILLATIONS AND WAVES. (1 cr; prereq 3011 or ¶3011; 3 lab hrs per wk)
Laboratory exercises in oscillations and waves.

3201s. THERMODYNAMICS. (4 cr; prereq 1281 or 1321 or 1421 or #; 3 lect and 1 problem hrs per wk)
The laws of thermodynamics, entropy, and probability; applications to simple systems, phase equilibrium, chemical potential.

3501f,w. MODERN PHYSICS. (4 cr [0 cr for phys maj], §3511-3512-3513; prereq 1291 or 1341 or 1441 or 1106; 3 lect and 1 problem hrs per wk)
Descriptive course. Quantum mechanics, hydrogen atom, multielectron atoms, molecular structure, quantum statistics, thermal radiation, solid state physics, nuclear physics.

3511f-3512w-3513s. MODERN PHYSICS. (4 cr per qtr; prereq 1291 or ¶1291 or 1341 or ¶1341 or 1441 or ¶1441 or 1106, Math 1231 for 3511...Math 3212 or ¶3212 or 3066 or ¶3066 or equiv for 3512; 3 lect and 1 problem hrs per wk)
Introduction to special relativity, statistical physics, quantum mechanics; selected topics in atomic, molecular, solid state, nuclear, and particle physics phenomena.

3515f,w. 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.

3801. INTRODUCTION TO THE PHYSICS OF PHOTOGRAPHY. (5 cr; prereq high school algebra, some photographic experience; 3 lect, 1 discussion, and 2 lab hrs per wk)
Principles of optics, electricity applied to photographic processes. Image formation; intensity, color of illumination; exposure of photographic materials. Technical literature applied to pictorial photography or tone reproduction; line reproduction and duplication.

3970. DIRECTED STUDIES. (1-5 cr per qtr; prereq #, Δ)
Guided individual reading or study in areas arranged by student and faculty member.

5021f-5022w. INTRODUCTION TO ANALYTIC MECHANICS. (4 cr per qtr; prereq 3011, Math 3213 or equiv; 3 lect and 1 problem hrs per wk)
Analytic course in Newtonian mechanics. Vectors and vector operators; angular momentum; central force problem; systems of particles; tensors; rigid bodies; moving coordinate systems; continuous media; Lagrange equations. Mathematics beyond prerequisites developed as required.

5023w-5024s. INTRODUCTION TO ELECTRIC AND MAGNETIC FIELDS. (4 cr per qtr; prereq 3011, Math 3213 or equiv; 3 lect and 1 problem hrs per wk)
Classical theory of electric and magnetic fields making free use of vector algebra and vector calculus. Maxwell's equations for free space and material media. Wave solutions.

5025. SPECIAL TOPICS IN ELECTRIC AND MAGNETIC FIELDS. (4 cr; prereq 5024; 3 lect and 1 problem hrs per wk)
Topics selected by instructor.

5031f-5032w-5033s. TOPICS IN MATHEMATICAL PHYSICS. (4 cr per qtr; prereq two 5xxx mathematics courses; 3 lect and 1 problem hrs per wk)
Mathematical techniques for physics; application of mathematical methods to physical problems.

5051f-5052w-5053s. CLASSICAL PHYSICS. (4 cr per qtr; prereq 5022 and 5024, advanced calculus or #; 3 lect and 1 problem hrs per wk)
Classical mechanics, special relativity, and classical electrodynamics. Applications of advanced mathematical techniques.

5061. NUMERICAL METHODS IN PHYSICS. (4 cr; prereq 5021, 5023; 2 lect and 4 lab hrs per wk)
Solution of physics problems (mechanics, electricity and magnetism, quantum mechanics, statistical physics) by numerical techniques.

5090. PHYSICS OF MUSICAL INSTRUMENTS. (3 cr [no cr for physics grad students; may be repeated for cr with #], §MuEd 5750; prereq #)
Seminar: physical characteristics, processes in playing musical instruments. Nonmathematical; designed to improve performance and teaching skills. Electronic methods to sense and display cues that assist performance and teaching.

5091w. PHYSICAL ACOUSTICS OF MUSIC. (5 cr [no cr for physics grad students]; prereq 1 yr high school algebra and jr or sr or grad student in music or music education or equiv background in music theory and practice, or #; 3 lect, 1 discussion, 3 lab hrs per wk)
Principles of physics and acoustics related to musical sounds, musical instruments, and the electronic production and reproduction of musical sounds. Laboratory.

5101f-5102w. INTRODUCTION TO QUANTUM MECHANICS. (4 cr per qtr; prereq 3512; 3 lect and 1 problem hrs per wk)
Mathematical techniques of quantum mechanics. Wave packets; Schrödinger equation, angular momentum; radial equation; spin, perturbation theory; collision theory.

5121f. METHODS OF EXPERIMENTAL PHYSICS: I. (5 cr; prereq 3513 or #...knowledge of FORTRAN programming desirable; 3 lect and 4 lab hrs per wk)
Contemporary techniques. Includes probability and errors, introduction to analog and digital electronics, experimental strategy, and introduction to computer-based data acquisition and experimental control.

5122w. METHODS OF EXPERIMENTAL PHYSICS: II. (4 cr; prereq 5121 or #; 2 lect and 6 lab hrs per wk)
Contemporary techniques. Includes applications of Fourier transforms, signal averaging and phase-lock detectors, high-vacuum techniques, magnet and charged particle beam design. Laboratory: problems involving the use of microcomputers for data acquisition and experimental control.

Major Requirements and Course Descriptions

5123s. METHODS OF EXPERIMENTAL PHYSICS: III. (4 cr; prereq 5122 or #; 8 lab hrs per wk)

Contemporary techniques. Laboratory: choice of experimental projects in low temperature, solid state, nuclear, elementary particle, and cosmic ray physics.

5124. EXPERIMENTAL PROJECT. (Cr ar; prereq 5123, #)

Research project in area of contemporary interest in physics. Project must be approved by faculty coordinator prior to registration.

5151f-5152w-5153s. QUANTUM MECHANICS. (4 cr per qtr; prereq 5102 or equiv, advanced calculus or #; 3 lect and 1 problem hrs per wk)

Development from first principles. Schrödinger equation, angular momentum, scattering, matrix representations, spin, approximation methods, interaction with electromagnetic field, identical particles, applications to atomic systems.

5162. INTRODUCTION TO PLASMA PHYSICS. (4 cr; prereq 5022 and 5024 or #; offered alt yrs)

Magnetohydrodynamics and properties of collisionless plasmas, applications to magnetic field of earth and sun and 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)

5201: Thermodynamics, statistical mechanics. 5202: Applications of thermodynamics and statistical mechanics, kinetic theory, fluctuations, transport theory.

5211s. INTRODUCTORY SOLID STATE PHYSICS. (4 cr; prereq 5101, 5202 or equiv; 4 lect hrs per wk)

Diffraction of waves in solids; electron band structure; crystal binding and vibrations; optical, dielectric, and magnetic properties of solids.

5231f-5232w-5233s. INTRODUCTION TO SOLID STATE PHYSICS. (4 cr per qtr; for grad and advanced undergrad students in physics, science, and engineering; 4 lect hrs per wk)

5231: Crystal structure and binding; diffraction; phonons; thermal and dielectric properties of insulators. 5232: Free-electron model; band structure; semiconductors; diamagnetism; paramagnetism; ferromagnetism and antiferromagnetism. 5233: Optical phenomena, lasers; superconductivity; surface properties; ferroelectricity.

5301s. INTRODUCTION TO NUCLEAR PHYSICS. (4 cr; prereq 5102 or equiv; 3 lect and 1 problem hrs per wk)

Static properties and dynamic processes of atomic nuclei. Survey for nonspecialists; first course for those intending to specialize in nuclear physics.

5351. EXPERIMENTAL PARTICLE PHYSICS. (4 cr; prereq 3513; 3 lect hrs per wk and field trips)

Interactions of particles and photons with matter and radiation. Detectors for particles and photons used in elementary particle, nuclear, and cosmic ray physics.

5371s. INTRODUCTION TO ELEMENTARY PARTICLE PHYSICS. (4 cr; prereq 5102 or equiv; 3 lect and 1 prob hrs per wk)

Relativistic kinematics; mass, spin, isospin, and strangeness of elementary particles; SU3 classification and the quark model; particle reactions and decays; experimental methods of detection and analysis.

5401. INTRODUCTION TO CONTEMPORARY PROBLEMS IN COSMIC RAY AND SPACE PHYSICS. (4 cr; primarily for students specializing in other branches of physics; prereq #; offered alt yrs)

Cosmic rays; characteristics, motion in the interplanetary and interstellar medium. X-rays and radio astronomy.

5441w. INTRODUCTORY DYNAMIC METEOROLOGY I. (5 cr; prereq 1291 or 1341 or 1441 and Math 3213 or 5602 or #, 3 lect and 3 lab hrs per wk; offered alt yrs)

Fluid dynamics of large-scale weather systems; mathematical introduction to quasi-geostrophic model used in numerical weather prediction. Concurrent laboratory study of weather charts to illustrate application of theory.

5442s. INTRODUCTORY DYNAMIC METEOROLOGY II. (4 cr; prereq 5441 or #; offered alt yrs)

Energetics and general circulation of the atmosphere.

5451w. CLOUD PHYSICS. (3 cr; prereq Math 3211 or equiv, 1 yr general physics; 3 lect hrs per wk)

Composition of the atmosphere, past, present, and future. Thermodynamics of atmosphere with condensable water; properties and growth of drops and ice crystals; particles in the atmosphere.

5452s. CLOUD SYSTEMS. (3 cr; prereq Math 3211 or equiv, 1 yr general physics; 3 lect hrs per wk)

Circulation, energy balance of atmosphere. Radar techniques for analyzing cloud systems. Cloud structure and motion.

5453. ELECTRICAL PROPERTIES OF CLOUDS. (3 cr; prereq Math 3211 or equiv, 1 yr general physics; 3 lect hrs per wk)

Structure, thermodynamics, and electrical properties of water and ice. Ions in the atmosphere. Generation of charge and its effects on cloud processes. Generation of lightning and properties of lightning discharges.

5461. PHYSICS AND CHEMISTRY OF THE EARTH'S UPPER ATMOSPHERE. (4 cr; prereq general physics, calculus)

Survey of atmosphere above 15 km; physics and chemistry of the stratosphere, mesosphere, and thermosphere; temperature and density profiles; major and minor constituents and their distributions; aspects of pollutants; reactions and rates; global variation of constituents; the energy budget of the atmosphere.

5551f. TOPICS IN PHYSICS FOR BIOLOGY AND MEDICINE: MECHANICS AND MOLECULAR PHYSICS. (5 cr; prereq general physics and 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.

5552w. TOPICS IN PHYSICS FOR BIOLOGY AND MEDICINE: ELECTRICITY AND SIGNALS. (5 cr; prereq general physics and calculus; offered alt yrs)

Electricity, circuits (electrocardiogram, networks, nerve conduction); transducers, amplifiers; oscillators; feedback and control; signal analysis (Fourier analysis, correlation functions, power spectra).

5553s. 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 #; 3 lect and 1 problem hrs per wk)

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.

5924f. HISTORY OF 19TH-CENTURY PHYSICS. (4 cr, §HSci 5924; prereq general physics or #)

Conceptual developments in physics in 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 sr physics majors, Δ)**5954su. PRACTICAL PHYSICS FOR PHYSICS TEACHERS.** (5 cr [no cr for physics grad students or minors]; prereq college level introductory physics; 8 lect and 10 lab hrs per wk)

Review of basic principles of physics for secondary teaching. Emphasis on laboratory work with simple inexpensive demonstration/laboratory devices that adapt readily to high school physics classes.

5970. DIRECTED STUDIES. (1-5 cr; prereq #, Δ)
Independent, directed study in areas arranged by the student and a faculty member.**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—Chair and Director of Graduate Studies, Eugene Grim, 6-255 Millard Hall; **Director of Undergraduate Studies,** Gordon Kepner, 6-255 Millard Hall

Professors: Bacaner, Cavert, Donaldson, Fox, Grim, Johnson, Levitt, Lifson, Meyer, Oppenheimer, Poppele, Purple, Soechting, Terzuolo, Zanjani

Associate Professors: Anderson, Knox, H. C. Lee, J. S. Lee, Y. C. P. Lee, Wangenstein

Assistant Professors: Blackshear, Fohlmeister, Kepner, Stish

Instructors and Lecturers: Bloom, Dufresne (lecturer), Ebner (lecturer), Love (lecturer)

Physiology aims to understand the functions of the human body by pursuing systematic 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 non-science majors, is acceptable for group B.

B.A. Major Sequence

Required Preparatory Courses—One year each of college chemistry, physics, and mathematics (through integral calculus)

Major Requirements—3055, 3056; 20 3xxx-5xxx cr in approved courses from related fields such as mathematics, physics, and chemistry

Major Requirements and Course Descriptions

1001f. HUMAN PHYSIOLOGY. (4 cr; not open to health science students; prereq high school biology, high school chemistry or #; 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.

1002w. HUMAN PHYSIOLOGY. (4 cr; introductory survey for allied health sciences; prereq biology, 1 qtr chemistry at high school level or above, human anatomy recommended; 3 lect, 2 dem hrs per wk) Blackshear

3051w. HUMAN PHYSIOLOGY. (5 cr; primarily for nursing and physical therapy students; prereq 1 yr chemistry, biology; 4 lect, 2 dem hrs per wk) Love

3052f, 3053w. PRINCIPLES OF PHYSIOLOGY. (3 cr per qtr; prereq 1 yr each college chemistry, physics, mathematics through integral calculus) Johnson, Levitt

3055f, 3056w. PRINCIPLES OF PHYSIOLOGY. (5 cr per qtr; prereq 1 yr each college chemistry, physics, mathematics through integral calculus) Johnson, Levitt

3070f. NEUROPHYSIOLOGY. (2 cr; primarily for pharmacy students; prereq biochemistry, human or mammalian anatomy; begins 7th wk of qtr) Staff

3071w. HUMAN PHYSIOLOGY. (5 cr; primarily for pharmacy students; prereq 3070) Staff

3091. HONORS COURSE: READINGS IN PHYSIOLOGY. (Cr and hrs ar [may be repeated]; open to honors candidates in physiology only) Staff
Selected topics; written or oral reviews prepared and discussed on tutorial basis.

3092. HONORS COURSE: PROBLEMS IN PHYSIOLOGY. (Cr and hrs ar [may be repeated]; 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.

5103f. GENERAL PHYSIOLOGY. (3 cr; prereq physical chemistry, #) Grim, Johnson, Kepner, Levitt, Lifson
Mechanisms of membrane transport and energy transformation in cells, tissues, and organisms.

5104w. NEUROPHYSIOLOGY. (4-6 cr [2 cr lab optional]; prereq neuroanatomy; #) Fohlmeister, Knox, Poppele, Purple, Soechting, Terzuolo

5105s. CARDIOVASCULAR PHYSIOLOGY. (4 cr; prereq #) Bacaner, Cavert, Fox, Johnson

5106f. RESPIRATORY PHYSIOLOGY. (3 or 4 cr [4-cr regis includes lab and is intended for physiology grad students only]; prereq #) Kronenberg, Wangenstein

5107w. ALIMENTARY PHYSIOLOGY. (3 cr; prereq #) Grim, Lifson

5108s. NEPHROLOGY. (3 cr; prereq #) Staff

5110w-5111s. HUMAN PHYSIOLOGY. (4 cr per qtr; primarily for first year med students; prereq anatomy, biochemistry, 5110 for 5111) Staff

5113f,w,s. PROBLEMS IN PHYSIOLOGY. (Cr and hrs ar; prereq #) Staff
Topics assigned for readings or laboratory study; conferences.

5116s. BIOPHYSICAL APPROACHES TO PHYSIOLOGY. (4 cr; prereq 3055 or #; 2 lect, 2 conf hrs per wk) Kepner
Membrane permeability and transport. Detailed study of fundamental and classic research papers that provide the physical-chemical foundations for these concepts.

Polish

See Russian and East European Studies.

Political Science (Pol)

Staff—Chair, Virginia Gray, 1414 Social Sciences Building; **Director of Undergraduate Studies,** Terence Ball, 1466 Social Sciences Building; **Director of Honors,** Raymond Duvall, 1333 Social Sciences Building; **Undergraduate Advisers:** 1482 Social Sciences Building

Regents' Professor: Turner

Professors: Aldrich, Backstrom, Ball, Duvall, Flanigan, Fogelman, Gray, Holt, Jernberg (Humphrey Institute), Krislov, Kudrle (Humphrey Institute), Murphy (History), Scott, Shively, Sorauf, Sullivan

Associate Professors: Freeman, Job, Kvavik, B Nelson (Humphrey Institute), Nimt, Sampson, Shaw, Walcott

Assistant Professors: Dietz, Strom

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 enter the departmental honors program, which provides opportunities to participate in small seminars and to work closely with faculty members on a research project.

Undergraduate Seminars, Fieldwork, Internships, and Satellite Courses—Undergraduate advisers can provide detailed information about special study opportunities offered by the department, including a yearly competition for paid internships in the Washington, D.C. and Minnesota offices of Minnesota members of Congress.

Three-credit 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.

A maximum of eight elective credits may be completed in fieldwork and internships.

In two-credit "satellite" courses (1010), which are offered in conjunction with 1xxx courses, students examine specialized topics related to the concerns of the "parent" courses. Topics and instructors are announced before and during the first week of regular course meetings; only students already enrolled in the parent courses will be admitted. Enrollment in each course 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.

B.A. Major Sequence

Students seeking admission to the major must meet the following criteria: new advanced standing student 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 level political science courses (including 3051), taken on A-F grading and with grades of C or better.

Of the required 3xxx-5xxx level courses, at least two courses must be from the political theory, comparative government and politics, or international relations subfields, and at least two from the politics and behavior, American governmental systems and processes, or public law subfields. No more than four courses may be taken in any one subfield.

Course work completed elsewhere can be used for credit in the major only with department approval. All majors must complete at least 20 credits of 3xxx- or 5xxx- level political science courses on the Twin Cities campus.

For information on requirements for the major project, contact the undergraduate advising office, 1482 Social Sciences Building.

Students ready to declare a major (or double major) should contact the undergraduate advising office, 1482 Social Sciences Building, where staff advisers, and a faculty adviser assigned at this time, will help in the selection of course work appropriate to educational 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-level political science courses from two fields

Major Requirements and Course Descriptions

Internships, fieldwork, and directed study 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 adviser in 1482 Social Sciences Building about the proposed program and must obtain approval of the director of undergraduate studies.

General

1001. AMERICAN GOVERNMENT AND POLITICS. (5 cr) Staff

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.

1010. SATELLITE SEMINAR. (2 cr per qtr; prereq #)

Selected topics in political science, to be determined by instructor. Students must be registered in an appropriate 1xxx political science course. Such registration entitles students to apply for registration in a 1010 seminar related to that course. Seminar offerings are announced prior to and during the first week of the quarter.

1025. WORLD POLITICS. (4 cr) Duvall, Freeman, Job, staff

Contemporary international relations; forms of state interaction; problems of conflict and cooperation.

1025H. HONORS COURSE: WORLD POLITICS. (4 cr; open to freshmen and sophomores) Staff

Intensive introductory examination of contemporary international relations; forms of state interaction; problems of conflict and cooperation. Small group discussion opportunities.

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.

1027. URBAN POLITICS. (4 cr)

Urban politics and issues facing American cities. Political conflicts over economic and social problems.

1041. CONTEMPORARY POLITICAL IDEOLOGIES. (4 cr) Ball, Fogelman, Shaw, staff

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) Duvall, Holt, Nimtz, Strom

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, Fogelman, Shaw

Major concepts, ideas, and arguments concerning topics such as liberty, justice, obligation, consent, authority, violence.

3051. INTRODUCTION TO POLITICAL ANALYSIS. (5 cr) Fogelman, Holt, Shively, staff

Formation of political communities, political participation, policymaking, compliance, legitimacy, political development, types of political systems. Empirical and normative problems. Comparisons among major countries.

3051H. INTRODUCTION TO POLITICAL ANALYSIS. (5 cr) Staff

Intensive introductory examination of the formation of political communities, political participation, policymaking, compliance, legitimacy, political development, types of political systems. Empirical and normative problems. Comparisons among major countries. Small group discussion opportunities.

3085. INTRODUCTION TO POLITICAL RESEARCH. (4 cr; prereq 3051 or #) Flanigan, 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)

Faculty-supervised research related to work in political or governmental organizations.

3080. INTERNSHIP. (4 cr per qtr [8 cr max]; S-N only; prereq Δ) Backstrom, staff
Internship with government or community organizations, arranged by the department and awarded competitively usually each spring quarter.

3108H. HONORS COURSE: THE POLITICAL SCIENCE DISCIPLINE. (3 cr; prereq political science honors program majors, #)
Political science as an academic discipline: subfields, major intellectual problems, trends; approaches to problems of political phenomena.

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]; open only to political science honors program majors; prereq 3109H)
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, Shaw
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 science or #) Ball, Shaw
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.

3668. RECENT EMPIRICAL THEORY. (4 cr; prereq 3051 or #) Aldrich, Fogelman
Empirical theories such as those of power, systems, games, structural functionalism, conflict. Usefulness of these formulations in political analysis.

3699. ADVANCED SEMINAR. (3 cr; prereq jr or sr, #) Staff
Advanced analysis with supervised research and writing in areas of political theory.

5610. TOPICS IN POLITICAL THEORY. (4 cr; prereq 3051 or 1061 or 8 cr in social science or #) Staff
Topics specified in *Class Schedule*.

5654. DEVELOPMENT OF POLITICAL THOUGHT: ANCIENT AND MEDIEVAL (PLATO TO AQUINAS). (4 cr; 1061 recommended or 9 cr in social science) 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 science) Ball, Dietz, staff
Renaissance; Machiavelli; More; Reformation; Luther; Calvin; liberalism; Hobbes and Locke; Enlightenment; Montesquieu; Rousseau.

5656. DEVELOPMENT OF POLITICAL THOUGHT: 19TH AND 20TH CENTURIES. (4 cr; 1061 recommended or 9 cr in social science) Ball, Dietz, staff
French Revolution and reaction; Burke; utilitarianism; Bentham; Hegel; socialism; Marx; rise of democracy; Mill; Tocqueville; selected 20th-century thinkers.

5657. MARX AND THE MARXISTS. (4 cr; prereq 3051 or 9 cr in social science or #) Ball, Dietz, staff
Central ideas of Karl Marx and major subsequent interpretations of Marxism. Original writings of Marx, Engels, Lenin, Gramsci, Mao, other leading Marxists. Scholarly interpretations.

Comparative Government and Politics

3469. POLITICAL ELITES AND LEADERSHIP. (4 cr; prereq 1054 or 3051 or #) Nimtz
Comparative political leadership, political recruitment patterns, executive and legislative behavior, political power structure in industrial and nonindustrial states.

3471. COMPARATIVE POLITICAL PARTIES AND INTEREST GROUPS. (4 cr; prereq 1054 or 3051 or #) Kvavik, Nimtz, Strom
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-party, and multi-party systems.

3473. COMPARATIVE POLITICAL PARTICIPATION. (4 cr; prereq 1054 or 3051 or #) Kvavik, Nimtz
Comparative study of the relationship of mass political behavior to governmental activity.

3475. COMPARATIVE PUBLIC POLICY. (4 cr; prereq 1054 or 3051 or #) Freeman
Policymaking and administrative implementation in high and low income countries; content and impact of economic development and social welfare policies.

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.

3499. ADVANCED SEMINAR. (3 cr; prereq 1054 or 3051 or #) Staff
Advanced analysis with supervised research and writing in areas of comparative government and politics.

Major Requirements and Course Descriptions

5410. ADVANCED TOPICS IN GOVERNMENT AND POLITICS. (4 cr; prereq 3051 or non-political science graduate student 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 non-political science graduate student or #) Holt, Shively, Strom, staff

Political institutions in their social settings; power and responsibility; governmental stability; political decision making, government and economic order.

5463. GOVERNMENT AND POLITICS OF SCANDINAVIAN COUNTRIES. (4 cr, \$Scan 5463; prereq 3051 or non-political science graduate student or #) Kvakik, Strom

Scandinavian political institutions and behavior; Scandinavian party politics, interest groups, and legislative behavior. Voting patterns and voter alignments. Emergence of social democratic state.

5465. CANADIAN GOVERNMENT AND POLITICS. (4 cr; prereq 3051 or non-political science graduate student or #) Job

Structure and operation of Canadian governmental institutions; Canadian political parties and electoral behavior; the French-Canadian nation; federal-provincial distribution of powers and conflicts; current public policy issues including U.S.-Canadian relations.

5467. JAPANESE GOVERNMENT AND POLITICS. (4 cr; prereq 3051 or non-political science graduate student or #; offered when feasible) Turner

Economic and political development of Japan; operation of governmental forms and political parties and their relation to traditional social structures; patterns of change.

5471. GOVERNMENT AND POLITICS OF THE SOVIET UNION. (4 cr; prereq 3051 or non-political science graduate student or #) Turner

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 non-political science graduate student or #) Turner

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.

5476. GOVERNMENT AND POLITICS OF SOUTH ASIA. (4 cr; prereq 3051 or non-political science graduate student or #; offered when feasible) Staff

Government institutions in historical and social settings. Dynamic processes of modernization within a democratic institutional framework. Public policies involving social and economic development; agrarian reform, population control, industrial growth.

5477. MIDDLE EASTERN GOVERNMENT AND POLITICS. (4 cr; prereq 3051 or non-political science graduate student 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 non-political science graduate student 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 non-political science graduate student or #) Staff

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 non-political science graduate student 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 the sea negotiations, international petroleum politics, limitation of arms races, creation of new international economic order.

3835. THE INTERNATIONAL SYSTEM. (4 cr) Job

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.

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 non-political science grad student) 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 non-political science grad student or #) Staff

Topics of current analytic or policy importance in international relations/foreign policy. Topics vary.

5875. AMERICAN DIPLOMACY AND FOREIGN ECONOMIC POLICY. (4 cr; prereq 3836 or non-political science grad student or #) Sampson

Issues and processes related primarily to economic or diplomatic aspects of U.S. foreign policy; implications for U.S. defense and domestic policies; problems of coordinating information gathering, decision making, and implementing foreign policy apparatus under crises and noncrisis conditions.

5877. COMPARATIVE FOREIGN POLICY. (4 cr; prereq 3836 or non-political science grad student or #) Sampson

Comparative analysis of foreign policies of major states; national and international determinants of foreign policy behavior.

5881. INTERNATIONAL LAW. (5 cr; prereq 3835 or non-political science grad student or #) Staff

Growth and character of international law; sources and evidences; relations to national law; subjects (individuals, states, international agencies); principles; international courts and jurisdiction; state territory; law of the sea; legal responsibility of states; treaties and agreements of diplomatic and consular agents; human rights.

5883. INTERNATIONAL ORGANIZATIONS.

(4 cr; prereq 3835 or non-political science grad student 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 non-political science grad student or #) Job

Normative issues surrounding international violence; causes of violence and mechanisms for creating international peace; alternative structures for limiting future violence and maintaining peace.

5886. INTERNATIONAL DIPLOMACY, BARGAINING, AND NEGOTIATION. (4 cr; prereq 3835 or non-political science grad student or #) Staff

Strategies and processes of international diplomacy, bargaining, and negotiation to resolve contemporary international disputes, including international security, arms limitation, and disarmament.

5889. THE POLITICS OF GLOBAL ECONOMIC RELATIONS. (4 cr; prereq 3835 or non-political science grad student or #) Duvall

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. (formerly 5739). THE POLITICS OF ETHNIC COMMUNITIES. (4 cr; prereq 6 cr in social science) Nimtze

Cross-cultural study of politics of ethnic communities; emphasis on politics of black communities in the U.S. 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.

3799. ADVANCED SEMINAR. (3 cr; prereq jr or sr, #) Staff

Advanced analysis with supervised research and writing in areas of politics and behavior.

5704. ORGANIZATIONAL THEORY AND BEHAVIOR. (4 cr; prereq 1001 or equiv or #) Walcott

Operation and significance of complex, formal organizations in the political system; public bureaucracy. Communication and influence processes; decision making and innovation; relation of organization to environment.

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 #) Aldrich, 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 #) Aldrich, Backstrom

National, state, and local campaigns and elections; research in local political parties and campaigns.

5741. POLITICAL BEHAVIOR OF WOMEN.

(4 cr; prereq 1001 or equiv or 3051 or #) Gray

Women as political actors. Mass political behavior, women's political movements, women in political parties and elective office, the status of women in different societies.

Major Requirements and Course Descriptions

5767. PUBLIC OPINION AND VOTING BEHAVIOR. (5 cr; prereq 1001 or equiv or #) Flanigan, Shively

Major factors influencing electoral decisions; political attitude formation and change. Data analysis laboratory required.

5769. POLITICAL POLLING. (4 cr; prereq 3766 or 3796 or Jour 3796 or Pol 5737 or 5738 or 5767) Sullivan

Polling in political campaigns; assessing candidate images; sample selection; questionnaire construction; impact of question wording; interviewing techniques; telephone polling; analysis of poll data.

American Governmental Systems and Processes

3306. THE AMERICAN PRESIDENCY. (4 cr; prereq 1001 or equiv or #) Shaw, Walcott

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 #) Walcott

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, Shaw

Internal organization, committee system, party leadership, norms, recruitment; legislative policymaking; relationship with the president and bureaucracy; interest group, political party, and constituency influences on the congressional process.

3309. JUDICIAL PROCESS. (4 cr; prereq 1001 or equiv or #) Krislov, 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*.

3321. ISSUES IN AMERICAN PUBLIC POLICY. (4 cr) Gray, staff

Major public policy issues in such areas as social welfare and education, and political forces molding policy choices and impact of such choices.

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.

3353. FIELDWORK IN LOCAL GOVERNMENT. (4 cr; prereq 1001 or equiv or #) Backstrom

Field study of Minnesota municipal, county, and metropolitan government; powers, structure, official administration, programs. Students arrange work assignments with local officials.

3399. ADVANCED SEMINAR. (3 cr; prereq jr or sr, #) Staff

Advanced analysis with supervised research and writing in areas of American governmental systems and processes.

5303. THE AMERICAN DEMOCRACY. (4 cr; prereq 1001 or equiv or #) Flanigan, Shaw, Sullivan

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.

5321. AMERICAN ECONOMIC POLICY. (4 cr; prereq 1001 or equiv or #) Staff

Economic policymaking processes; major issues such as fiscal and monetary policy, subsidies, economic regulation, and direct controls; governmental impact on the private economic sector.

5322. AMERICAN SOCIAL POLICY. (4 cr; prereq 1001 or equiv or #) Gray

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 or 6 cr in ROTC or non-political science student, grad or #) 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.

5328. METROPOLITAN GOVERNMENT AND POLITICS. (4 cr; prereq 1001 or equiv or #) Nimtz, Scott

Development of the modern American metropolis with emphasis on central cities and suburbs; intergovernmental relationships in the metropolis; state and federal responses to metropolitan problems; politics of reforming metropolitan government.

Public Law

3323. CIVIL LIBERTIES IN AMERICA. (4 cr, \$5502; prereq 1001 or equiv or #) Krislov, Sorauf
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.

3510. TOPICS IN PUBLIC LAW. (4 cr) Staff
Topics of current analytic or policy relevance in the public law subfield.

3561. COMPARATIVE LEGAL SYSTEMS. (4 cr; prereq jr, sr or #; offered alt yrs) Krislov
Elementary survey, primarily for social science students, of principal legal systems of the Western world. Organization, procedures, methods of growth, relation to political and economic systems, basic juristic conceptions. Roman law and European derivatives, Anglo-American law.

3562. DELIVERING JUSTICE. (4 cr) Krislov
Introduction to legal systems of societies in relation to their politics and culture. Normative aspects of legal systems in non-Western and Western law. Comparative study of legal processes and dispute resolutions.

3599. ADVANCED SEMINAR. (3 cr; prereq jr or sr, #) Staff
Advanced analysis with supervised research and writing in areas of public law.

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, \$3323; 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 #) 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, Thomas J. Bouchard, Jr., N-218 Elliott Hall; **Assistant Chair**, Gail B. Peterson, N-253 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**, Gail B. Peterson, N-253 Elliott Hall

Regents' Professor: Meehl

Professors: Berscheid, Bouchard, Burkhardt, Butcher, Campbell, Dawis, Depue, Dunnette, Fox, Garmezy, Hansen, Jones (Journalism), Legge, Leon, Lofquist, Overmier, Roberts, Snyder, Tellegen, Thompson, Viemeister, Weiss
Associate Professors: Borgida, Iacono, Peterson

Assistant Professors: Ackerman, Cudeck, Fletcher, Kanfer, McGue, Nissen

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, 3124, 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.

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 (to be taken as soon as possible after 1001) Two courses from 3011, 3031, 3051, 3061, 5011, 5012-5013, 5014, 5015, 5017, 5019, 5027, 5031, 5034, 5051, 5054, 5061, 5062, 5137, 5609

Two courses from 3014, 3101, 3124, 3201, 3206, 3604, 3617, 5141, 5202, 5206, 5501, 5701, 5702, 5703, 5704, 5705; CPsy 3303 or 5303, 3309 or 5301

Major project: 3902

Four elected 3xxx-5xxx level psychology courses (a total of two from 3960, 3970, 3990 may be used)

All major courses must be taken on A-F grading. At least four upper division courses in psychology must be taken on the Twin Cities campus.

Major Requirements and Course Descriptions

Psychology majors, especially those considering graduate work, are urged to elect mathematics and natural, social, and physical science courses. Prospective graduate students should also take further work in statistics and computer programming. Those not planning graduate work in psychology may, with adviser consent, design programs to prepare for paraprofessional work in interviewing, personnel, mental health, counseling, or research technology. A limited number of child psychology courses may be completed through the Institute of Child Development (double psychology-child psychology majors are not permitted).

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.

Minor Sequence— General Psychology

Required Preparatory Courses—1001, 3801 or equiv

Minor Requirements—two courses from 3011, 3031, 3051, 3061, 5011, 5012-5013, 5014, 5015, 5017, 5019, 5027, 5031, 5034, 5054, 5061, 5062, 5137, 5609; two courses from 3014, 3101, 3124, 3201, 3206, 3604, 3617, 5141, 5202, 5206, 5501, 5701, 5702, 5703, 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 Science

Required Preparatory Courses—1001, 3801 or equiv

Minor Requirements—two courses from 3011, 5011, 5012-5013, 5014, 5015, 5017, 5019, 5027; two courses from 3031, 3051, 3061, 5031, 5034, 5054, 5061, 5062, 5137, 5609

All minor courses must be taken on A-F grading. At least two upper division courses must be in psychology and 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 equiv

Minor Requirements—two courses from 3014, 3101, 3201, 3206, 3604, 3617, 5202, 5206; one course from 3124, 5141, 5501, 5701, 5702, 5703, 5705; one elective 3xxx- or 5xxx-level psychology course from those listed above.

All minor courses must be taken on A-F grading. At least two upper division courses must be in psychology and 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, Fox, Jenkins, Kendall, Weiss
Introduction to study of human behavior. Prerequisite for all advanced courses in psychology.

1001H. HONORS COURSE: GENERAL PSYCHOLOGY. (5 cr; prereq #)

1004f,w-1005w,st. INTRODUCTORY LABORATORY PSYCHOLOGY. (4 cr per qtr; prereq soph, 1001 or #1001) 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; cannot be applied toward any CLA degree) McGrath
Designed to help CLA students identify their interests, values, and skills with regard to career options. Effective job-seeking techniques. Individual and group projects on possible vocations.

3011f. INTRODUCTION TO PSYCHOLOGY OF LEARNING. (4 cr; prereq 1001, 1005 or Biol 1107 or #) Staff
Basic methods. Fundamental concepts and principles governing the learning process.

3014w. INTRODUCTION TO APPLIED PSYCHOLOGY. (4 cr; prereq 1001)
History and survey of professional applications of psychology in work, school, and community settings.

3031s. SENSATION AND PERCEPTION. (4 cr; prereq 1001, 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, 1005 or *1005) Nissen
Research problems and theoretical concepts in study of cognitive factors in perception, memory, and concept formation.

3061s. INTRODUCTION TO PHYSIOLOGICAL PSYCHOLOGY. (4 cr, \$5061; prereq 1001, 1005 or Biol 1009 or #) Roberts
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.

3124s. PSYCHOLOGY OF INDIVIDUAL DIFFERENCES. (4 cr; prereq 3801) Ackerman
Differential method in study of human behavior. Impact and importance of individual differences in modern society; instruments of measurement and behavior prediction in differential psychology; major determinants of individuality.

3201w. INTRODUCTION TO SOCIAL PSYCHOLOGY. (4 cr; prereq 1001) Snyder
Theories and research in social psychology. The effects upon individual attitudes, behavior of other persons, mass communications, group membership.

3206s. APPLIED SOCIAL PSYCHOLOGY. (4 cr; prereq 1001 and 3201)
Overview of field. Applications of social psychological theories to such areas as jury selection, media, behavioral medicine, desegregation, advertising, victimology, juvenile delinquency, and energy conservation programs.

3604f,s. INTRODUCTION TO ABNORMAL PSYCHOLOGY. (4 cr, \$5604; prereq 1001) Butcher
Abnormal psychology. Etiologies of behavioral disorders; available treatments.

3617f,s. INTRODUCTION TO CLINICAL PSYCHOLOGY. (4 cr; prereq 3604, 3801 or 5604)
Historical developments and contemporary issues; relevant research and clinical trends in psychological assessment methods and prevention and intervention strategies.

3801f,s. INTRODUCTION TO STATISTICAL METHODS. (4 cr; prereq 1001, Math 0009 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. (2 cr; prereq 1001, 1004-1005, 3801, jr or sr psychology major, Δ) Staff
Seminar for completion of the undergraduate major project paper. Concurrent registration with advanced composition recommended.

3960f,w,s. UNDERGRADUATE SEMINAR. (1-5 cr per qtr; prereq 1001, #) Staff
Current topics in 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, except for students in honors sequence and grad students) Staff
Learning theories and contemporary theories of information processing and cognition. Examples from animal research.

5012w-5013s. PSYCHOLOGY OF LEARNING. (4 cr per qtr; prereq 1001, 1005, 3011 or Biol 1107 and EBB 3111 or #, except for grad students) Overmier
Classical conditioning; instrumental learning. Evaluation of relevant theories.

5014s. PSYCHOLOGY OF HUMAN LEARNING AND MEMORY. (4 cr; prereq 1005 or 3011 or 3051 or #, except for students in honors sequence and grad students) Fox
Processes and principles of human learning and memory; feedback, instruction and learning, individual differences in learning, cognitive processes in learning and retention, theories of human memory.

5015. ADVANCED LEARNING AND COGNITIVE PROCESSING. (4 cr; prereq 3011 or 3051 or 5014, except for students in honors sequence and grad students) Nissen
Processes in human learning; verbal and perceptual learning. Memory, attention, and information processing.

5017f. ANALYSIS OF BEHAVIOR I. (4 cr, \$NSc 5017; prereq 3011, except for students in honors sequence and grad students) Thompson
Basic principles of operant and classical conditioning in the traditions of Thorndike and Skinner. Emphasis on basic principles, analytical methods and epistemological underpinnings.

5019s. HUMAN OPERANT BEHAVIOR. (4 cr; prereq 5011, 5017 or #) Thompson
Experimental analysis of complex human operant behavior based on systematic formulation presented in Psy 5017. Topics include discrimination, generalization, conditioned reinforcement and schedule control in human affairs, as well as integrating complex behavior to form natural sequences.

Major Requirements and Course Descriptions

- 5027s. APPLIED BEHAVIOR ANALYSIS.** (4 cr; prereq 1001, 5012 or 5017) Thompson
Applications of modern learning theory in education, mental health, drug abuse, business and mental retardation.
- 5031f. PERCEPTION.** (4 cr, NSc 5031; prereq 3051 or 3031 or #) Legge
Basic principles of perception with primary emphasis on vision. Study of color and pattern vision, space perception, physiological optics and impaired vision.
- 5034f. SENSORY PSYCHOBIOLOGY.** (4 cr, NSc 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.
- 5051s. PSYCHOLOGY OF HUMAN-MACHINE INTERACTION.** (4 cr; prereq 3051 or 3031 or #) Legge
Psychological and cybernetic models of human-machine communications, and analysis of factors that limit performance. Topics include psychology of computer use, design and evaluation of sensory aids, and a psychological perspective on robots.
- 5054w. PSYCHOLOGY OF LANGUAGE.** (4 cr; prereq 3011, except for students in honors sequence and grad students) Fletcher
Theories and experimental evidence in past and present conceptions of psychology of language.
- 5061f. FUNDAMENTALS OF PHYSIOLOGICAL PSYCHOLOGY.** (4 cr, §3061; prereq 1001) Roberts
Physiological and neuroanatomical mechanisms underlying behavior of higher vertebrates. Sensory mechanisms, sleep, wakefulness, and attention.
- 5062s. NEUROPSYCHOLOGY OF MOTIVATION AND LEARNING.** (4 cr, §NSc 5062; prereq 5061 or #) Roberts
Brain mechanisms of aggression, fear, pain, hunger, thirst, reproductive behavior, learning, and discrimination processes.
- 5101w. PERSONALITY.** (4 cr, §3101; prereq 5862 or §5862, honors candidate or grad student) Tellegen
Personality theories as alternative orienting viewpoints. Trait-oriented discussion of findings and conceptual and methodological problems of contemporary personality research.
- 5125w-5126st. DIFFERENTIAL PSYCHOLOGY.** (4 cr per qtr; prereq 5862 or #, honors candidate or grad student) Dawis, McGue
Methodology. Quantitative studies of nature of psychological traits and influence of age, sex, heredity, and environment in causation of individual and group differences in ability and temperament.
- 5137f (formerly 5134). INTRODUCTION TO BEHAVIORAL GENETICS.** (4 cr; prereq 3124 or 5126) Depue
Methodology for analyzing contribution of genetic and environmental factors to variance in normal and abnormal traits in humans and animals. Intelligence, neuroses, and psychoses. For all examples, independent variable will be genotype of an organism.
- 5141w. PSYCHOLOGY OF WOMEN.** (4 cr; prereq 1001)
Psychological and physical sex differences; developmental and environmental influences on dependency, aggression, achievement motivation, and achievement. Sex roles and sexuality during various life phases.
- 5201f. SOCIAL PSYCHOLOGY.** (4 cr; prereq 1001, 3201, psychology honors major or grad student or #) Berscheid
Classical and contemporary theories and research in social psychology with emphasis on social influence and group dynamics.
- 5202s. ATTITUDES AND SOCIAL BEHAVIOR.** (4 cr; prereq 1001, 3201 or #) Borgida
Attitude theory, measurement, and attitude change research in social psychology. The structure, function, and formation of attitudes; the relationship between attitudes and various social behaviors; basic principles of persuasion.
- 5206w. RESEARCH METHODS IN SOCIAL PSYCHOLOGY.** (4 cr per qtr; prereq 1001, 3201, 3801 or grad student or #) Staff
Overview of randomized and quasi-experimental designs suitable for research in social psychology. Validity, operational, and ethical issues in social psychological research.
- 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 grad students) Leon
Review of behavioral disorders. Etiology and treatment.
- 5609w. PSYCHOLOGY OF ADDICTIVE BEHAVIOR.** (4 cr; prereq 1001)
Evidence of factors implicated in the control of addictive behavior. Genetic, neurochemical, and environmental findings as they relate to alcoholism, drug abuse and dependence, smoking, obesity, bulimia, compulsive gambling, and other forms of addictive behavior.

5701w. PERSONNEL AND INDUSTRIAL PSYCHOLOGY. (4 cr; prereq 1001, 3801 or equiv or #) Staff

Principles of individual differences and psychological measurement applied to problems of evaluating, recruiting, and selecting members of ongoing organizations. Job analysis, job behavior description, performance measurement, selection and placement strategies, minority group employment, and utility of organizational strategies in occupation selection and placement.

5702s. PSYCHOLOGY OF INDIVIDUAL BEHAVIOR IN ORGANIZATIONS. (4 cr; prereq 5701 or 8 cr in psychology or #) Kanfer

Psychological research and methodology applied to the study of human behavior in on-going organizations. Models of motivation, 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 8 cr in psychology or #) Staff

Theories, methods, and research findings regarding improving the performance of individuals, groups, and organizations; individual training and development; group work methods and problem solving strategies; methods of organizational development.

5704f. ENGINEERING PSYCHOLOGY. (4 cr; prereq 1001, 3801 or equiv or #) Ackerman
Survey of the capacities and limitations of human in person-machine interactions. Topics include attention, perception, manual control, human-computer interface, human factors applications.**5705. WORK MOTIVATION.** (4 cr; prereq 5702, 3801 or equiv) Kanfer
Examination of motivational processes and morale in work contexts. Emphasis on process theories of performance, turnover/withdrawal, work attitudes and interpersonal influences.**5751w,s. PSYCHOLOGY OF ADVERTISING.** (4 cr, §Jour 5251; prereq 1001) Jones
Psychological principles, research techniques, and applications in advertising and selling. Consumer attitudes and behavior. Psychological mechanisms upon which effectiveness of advertisements and commercials depends.**5861w. QUANTITATIVE METHODS IN PSYCHOLOGY.** (4 cr; prereq #) Viemeister
Elementary set theory, probability theory, matrix algebra, difference equations; construction and evaluation of behavior models.**5862f. PSYCHOLOGICAL MEASUREMENT: THEORY AND METHODS.** (4 cr; prereq 3801, honors candidate or grad students or #) Weiss
Types of measurement (tests, scales, inventories) and their construction; theory and measurement of reliability and validity.**5865. MEASUREMENT OF LATENT TRAITS.** (4 cr; prereq 5862 or #) Weiss

Theory and methods for measurement of latent psychological variables using dichotomous 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.

5884s. METHODS FOR MULTIVARIATE CO-VARIATION ANALYSIS. (4 cr; prereq PsyF 5111; offered alt yrs) Cudeck

Nonmathematical. Methods for analysis of matrices of interrelationships based on persons, variables, and occasions. Nonhierarchical and hierarchical methods of clustering. Factor analysis, including factor extraction, rotation, scoring, and comparison. Assumptions, limitations, interpretations, and applications.

5900H. HONORS SEMINAR: PSYCHOLOGY.

(1 cr per qtr; S-N only; prereq psychology honors major or #) Peterson
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. (1-8 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*

CLA students may take up to 16 credits of course work offered by other colleges. The credits may be applied toward CLA degrees, but may not be used to fulfill group distribution requirements. Descriptions of courses offered by the Hubert H. Humphrey Institute of Public Affairs can be obtained from the institute.

School of Public Health

CLA students may take up to 16 credits of course work offered by other colleges. The credits may be applied toward CLA degrees, but may not be used to fulfill group distribution requirements. Descriptions of courses offered by the School of Public Health can be found in the bulletin of that school. Public health courses that may be

Major Requirements and Course Descriptions

used for the CLA major in biometry are listed in this bulletin under the heading Biometry and may be applied to CLA degrees.

Religious Studies (RelS)

Staff—*Chair of Executive Committee*, William Malandra 192 Klaeber Court; *Director of Undergraduate Studies*, James Tracy, 522 Social Sciences; *Director of Graduate Studies*, Robert Tapp, 330 Ford Hall

Adjunct Faculty—*Professors*: Altholz (History), Asher (Art History and South and Southwest Asian Studies), Bachrach (History), Bagley (Social and Philosophical Foundations of Education), Barker (South and Southwest Asian Studies), Bormann (Speech-Communication), Delatre (American Studies), Farah (History), Hopkins (Philosophy), Kopf (History), Lincoln (Humanities), O'Brien (English), Schneider (French and Italian), Southall (Afro-American and African Studies), Spencer (Anthropology), Stavrou (History), Tapp (Humanities), Tracy (History)

Associate Professors: Dobbert (Social and Philosophical Foundations of Education), Malandra (South and Southwest Asian Studies), Paradise (Ancient Near Eastern and Jewish Studies), Prell (Anthropology), Ross (Student Affairs), Shaw (Political Science), Yates (American Studies), Zahavy (Ancient Near Eastern and Jewish Studies)

Assistant Professor: Sellow (Classical 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 course work 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, 125 Klaeber Court.

B.A. Major Sequence

Major Requirements—15 courses, 13 of them at the 3xxx-5xxx level and 9 of them from core courses distributed as follows:

- A. Phenomenological and comparative perspectives on religions: 1001 or 5001; 5890
- B. At least one course in philosophical perspectives on religions
- C. Social sciences perspectives on religions—minimum of two courses representing at least two social science areas
- D. Literary and artistic perspectives on religions—minimum of two courses
- E. Area and historical studies—minimum of two courses representing at least two religious traditions

Lists of courses approved for inclusion in groups B, C, D, and E are available in the brochure *Religious Studies at the University of Minnesota*.

Before admission to the program, you should consult the religious studies adviser, 125 Klaeber Court, for referral to faculty members in your area of interest. The degree program must have the adviser's approval.

Minor Sequence

Required Preparatory Courses—1001 or 5001

Minor Requirements—Four 3xxx-5xxx courses, including at least one in three of the following areas: philosophical perspectives on religions, social sciences perspectives on religions, literary and artistic perspectives on religions, area and historical studies.

1001. INTRODUCTION TO RELIGIOUS STUDIES. (4 cr, §5001) Tapp

Individual and social religious behavior; methodologies for studying it; emergence of modern religious studies. Theistic Western religions (Judaism, Christianity, Islam) and nontheistic Buddhism.

1031. INTRODUCTION TO THE RELIGIONS OF SOUTH ASIA. (4 cr, §SoAS 1504) Malandra

Introduction to Hinduism, Buddhism, and Jainism.

1032. RELIGIONS OF EAST ASIA. (4 cr, §EAS 1032) Waltner

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

1034. INTRODUCTION TO JUDAISM. (4 cr, §JwSt 1034, §JwSt 3034) Zahavy

Concepts, movements, and institutions in the development of classical Judaism, as manifested in the literature and festivals of the Jewish people from Second Commonwealth times to the present.

1035. INTRODUCTION TO CHRISTIANITY. (4 cr) Tapp

The thought and institutions of Christianity with emphasis on the present day. Origins in Judaism: the New Testament. Continuing theological issues, leaders and opponents of the church, the piety of the average Christian. Religious pluralism: Christianity in 20th-century America.

1036. THE RELIGION OF ISLAM. (4 cr, §MidE 1536) Farah

The rise of Islam. The role of Muhammad, Koran, traditions; fundamentals and observances of the faith; sectarian movements; the spread of Islam into Asia and Africa; Bahá's, Black Muslims; reformist movements and change.

3101f, 3102w, 3103s. RELIGIONS OF THE AMERICAN PEOPLE. (4 cr per qtr) Ross

Religious perspective on American experience, age of discovery to the present. Religious traditions, Western and non-Western, examined developmentally, descriptively, and chronologically. *3101*: Age of discovery to the federal period. *3102*: Federal period to 1890. *3103*: 1890 to present.

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) Lincoln

Religious ideas and institutions; myths, rituals, cosmologies, and systems of salvation. Methods for the objective study of religion and its historical and socio-cultural dimensions.

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; prereq 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.

5890w. SEMINAR IN RELIGIOUS STUDIES.

(5 undergrad cr per qtr, 3 grad cr per qtr; prereq sr 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*.

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 are designed to 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.

Note: ROTC courses that are not cross-listed with CLA courses count as CLA courses for the CLA graduation requirement if the ROTC program is completed. They do not count as CLA courses if the ROTC program is not completed.

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.

Aerospace Studies (Air)

Staff—Head, Col. Dan C. McNamara, USAF, 3 Armory

General Military Course

1104f. U.S. AIR FORCE DOCTRINE. (1 cr)

The doctrine, mission, and organization of the U.S. Air Force.

Major Requirements and Course Descriptions

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)
Air Force support forces. Organizations that support the combat commands. Air Force interaction with the Army and Navy.

1204f. EARLY HISTORY OF AIRPOWER.

(2 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.

(2 cr)
Uses of airpower in World War II. Development of an independent Air Force. Cold war strategy. Berlin airlift.

1206s. MODERN EMPLOYMENT OF AIRPOWER.

(2 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 Course

3301f. MILITARY MANAGEMENT.

(3 cr)
Management processes; the unique nature of Air Force management. Leadership, motivation, individual and organizational behavior, and communication skills. Lectures, discussions, student presentations, seminars, and experiential methods.

3302w. AIR FORCE LEADERSHIP COMMUNICATION.

(4 cr, §Spch 3111)
Interdisciplinary study of theory and practice of leadership. Theoretical approaches to management. Interpersonal communication skills in leadership practice; small group dynamics. Experience in task-oriented small group communication. Application to Air Force leadership situations.

3303s. CONTEMPORARY PROBLEMS IN AIR FORCE MANAGEMENT.

(3 cr)
Integration and application of management and leadership concepts to contemporary Air Force situations. Social problems and issues related to the all-volunteer, professional force, command and staff functions, ethics, responsibilities, human resource development. Lectures, discussions, student presentations, seminars, and experiential methods.

3401w. 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.

3402f. SEMINAR: FORMULATION AND IMPLEMENTATION OF U.S. DEFENSE POLICY.

(1 cr; prereq all aerospace 33xx courses, 3401, §Pol 5323)

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 policymaking process.

3404f. FLIGHT INSTRUCTION PROGRAM.

(5 cr; open only to AFROTC cadets; prereq Δ)

Twenty-five hours of flight instruction and practice. Federal aviation regulations, flight theory, aircraft instruments, meteorology, radio aids, navigation, and aircraft operation.

3413s. 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. C. Roger L. Syverud,
USA, 111 Armory

Preprofessional Division

Military Science I

0100f,w,s. LEADERSHIP LABORATORY.

(0 cr)
Developing basic military skills, leadership techniques and leader's knowledge for controlling, coordinating and communicating in a small unit environment.

1001f. BASIC MILITARY SKILLS.

(1 cr)
A leadership laboratory providing the basic skills and knowledge for drill and ceremonies, mountaineering, rifle marksmanship, other adventure training and physical conditioning.

1002w. BASIC MILITARY SKILLS.

(1 cr)
A leadership laboratory providing the basic skills and knowledge for drill and ceremonies with and without weapons, 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.

1010w,s. U.S. ARMY IN SOCIETY.

(2 cr)
Role of the Army in conduct of national defense; role of the officer, non-commissioned officer; National Guard and Reserve; organizational structure familiarization; career application for military and civilian.

1012w. U.S. MILITARY HISTORY. (2 cr; §Hist 1952)

Basic concept of military history including principles of war, military definitions and relationship of geography, economics, and technology to military history; warfare from colonial America to Grenada.

1013s. WORLD MILITARY HISTORY: INTERNATIONAL DIMENSIONS OF CONFLICT. (2 cr, §Hist 1953)

Role of U.S. military in international relations. Historical perspective of conflicts since 1945, to include Middle East, Latin America, NATO and Warsaw Pact, terrorism and nuclear confrontation.

Military Science II

1011s. U.S. MILITARY HISTORY: A PERSPECTIVE IN LEADERSHIP. (2 cr, §Hist 1951.)

History of military leadership from the Revolutionary War, Civil War, World War I, World War II and Vietnam. Emphasis on successful military leaders: Washington, Grant, Lee, Pershing, Patton, etc.

1221w. LEARNING TO LEAD. (2 cr)

Fundamental leadership traits. Principles and techniques. 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.

1004f. LEADERSHIP: SMALL UNIT RESPONSIBILITIES. (1 cr)

Laboratory to learn leadership responsibilities in a small unit and to begin developing specific leadership skills.

2002w. LEADERSHIP: SMALL UNIT COMMUNICATIONS, CONTROL AND COORDINATION. (1 cr)

Laboratory to develop the skills and knowledge associated with communicating on military radios and the command and control of a small military unit.

2003s. LEADERSHIP: SMALL UNIT TRAINING, TACTICS AND TERRAIN ASSOCIATION. (1 cr)

Laboratory that requires the developing leader to instruct a class, direct the tactical deployment of a small unit and to navigate by terrain to a prescribed location.

Directed Studies

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

Guided study of courses students cannot fit into their schedules.

**Professional Division
Military Science III**

3131f. LEADERSHIP ASSESSMENT AND TRAINING. (3 cr; prereq Δ, Leadership Laboratory)

Leadership traits and principles; role-playing situations, methods and techniques of preparing and conducting briefings and instruction; emphasis on group effort and interpersonal relations. Assessment Laboratory involves participation in tasks to identify leadership strengths, with comprehensive feedback.

3132w. LAND NAVIGATION AND MAP READING. (3 cr; prereq Δ, Leadership Laboratory)

Skills in reading and interpreting military maps and aerial photographs; basic land navigation techniques.

3133s. SMALL-UNIT TACTICS. (3 cr; prereq Δ, Leadership Laboratory)

Small-unit operations in conventional and unconventional battlefield environments; employment in tactical situations.

Military Science IV

3141f. MILITARY MANAGEMENT, ETHICS, AND PROFESSIONALISM. (3 cr; prereq Δ, Leadership Laboratory)

Staff procedures in military organizations; staff writing, code of military ethics and professionalism; role-playing situations and written practical exercises.

3142w. LEADERSHIP COMMUNICATIONS. (3 cr, §Spch 3111; prereq Δ, Leadership Laboratory)

Precepts and practices of military leadership; management psychology, interpersonal relationships, group dynamics, individual differences.

3143s. MILITARY LAW. (3 cr; prereq Δ, Leadership Laboratory)

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, Capt. A. R. Chauncey, USN, 203 Armory

**Basic Course
All NROTC Students—First Year**

1001f (formerly 0101). FUNDAMENTALS OF NAVAL SCIENCE. (2 cr)

Survey of the customs, traditions, and operations of the U.S. Navy. Descriptive overview and study of the various branches of the naval service.

1101w. NAVAL SHIPS SYSTEMS I. (2 cr)

Types, purposes, and structures of naval ships. Ship compartmentation, steam and fossil fuel propulsion systems, ship design, and ship stability characteristics.

Major Requirements and Course Descriptions

1102s. NAVAL SHIPS SYSTEMS II. (2 cr)
Nonsteam and nuclear ship propulsion systems, auxiliary ship support systems, ship control, and sensors.

All NROTC Students—Second Year

1201f. SEAPOWER AND MARITIME AFFAIRS. (3 cr, §Hist 5021, §Hist 5022)
Historical aspects affecting the development of the United States Navy from the American Revolution to the present. Examination of several critical, contemporary issues in naval/maritime affairs.

1202w. PRINCIPLES OF NAVAL WEAPONS SYSTEMS. (2 cr)
Theory and principles of energy fundamentals, radar, electro-optics, underwater acoustics, electronic scanning, beam propagation and feedback systems, and digital and analog computation used in modern weapons systems and military technology.

1203s. SCIENCE AND TECHNOLOGY IN THE DESIGN, CONSTRUCTION, AND USE OF MODERN WEAPONS SYSTEMS. (2 cr; prereq 1202)
Techniques and methods in fusing scientific principles and current technology to design and construct military weapons and integrated weapons systems. Includes study of weapon propulsion, guidance, launching, command, control, and communications, and survey of characteristics of several advanced weapons platforms.

Hist 5021w. OCEANIC HISTORY. (4 cr, §1201; prereq #)
Medieval and early modern maritime science and technology, resources, and motivation, East and West, and the process of expansion, to 1715.

Hist 5022s. OCEANIC HISTORY. (4 cr, §1201; prereq #)
European empires overseas, industrialization, and the transportation revolution on the oceans, West to East, to 1945.

Advanced Course

Navy Sequence—Third Year

3301f. INLAND AND COASTAL NAVIGATION. (3 cr)
Piloting, dead reckoning, fixes, running fixes, tides, currents, and anchoring. Rules of the nautical road.

3302w. CELESTIAL AND ELECTRONIC NAVIGATION. (4 cr; prereq trigonometry)
Navigation using celestial bodies. Modern electronic navigation systems.

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

3401. PRINCIPLES OF NAVAL MANAGEMENT I. (2 cr)
Management theory and its application to formal military organizations, national level to shipboard.

3402. PRINCIPLES OF NAVAL MANAGEMENT II. (2 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.

3353w. EVOLUTION OF ART OF WAR II. (2 cr; prereq #)
Military technology and theory from the industrial revolution through the armistice preceding World War II.

3354s. EVOLUTION OF ART OF WAR III. (2 cr; prereq #)
Warfare from World War II through the Vietnam experience.

Marine Corps Sequence—Fourth Year

3452f. AMPHIBIOUS WARFARE I. (2 cr; prereq #)
Amphibious warfare techniques from Gallipoli through World War II operations in the Mediterranean.

3453w. AMPHIBIOUS WARFARE II. (2 cr; prereq #)
From the Pacific campaigns of World War II through the postwar amphibious trials.

3454s. AMPHIBIOUS WARFARE III. (2 cr; prereq #)
Post-World War II amphibious operations; present-day concepts of amphibious operational planning.

Russian and East European Studies

Staff—Chair, Thomas S. Noonan, 251 Elliott Hall; **Associate Chair,** Irina Corten, 258 Elliott Hall; **Director of Undergraduate Studies,** Tatiana Prokopov, 250 Elliott Hall

Regents' Professor: Turner (Political Science)

Professor Emeritus: Rath

Professors: Godzich (Comparative Literature), Liberman (German), Noonan (History), Rudolph (History), Stavrou (History), Vecoli (IHRC), Weiss (German), Wright (History)

Associate Professors: R Adams (Geography), Beaven (Slavic Bibliographer, University Libraries), Donchenko (Slavic Languages), Jahn (Slavic Languages), Kulesov (Slavic Languages), Urness (James Ford Bell Library)

Assistant Professors: Brooks (Agricultural and Applied Economics), Corten (Slavic Languages), Polakiewicz (Slavic Languages), Prokopov (Slavic Languages)

The Department of Russian and East European Studies offers study of the Russian and Polish languages as well as the literature, history, geography, politics, and economics of the Slavic world. The department offers a major and a minor in both Russian language and literature and Russian area studies.

General Education—Courses recommended for general education are Russ 3421, 3422, 3511, 3512, 5211, and Slav 1501, 3701.

B.A. Major Sequence—Russian

Required Preparatory Courses—1101-1102-1103, 1104-1105-1106

Major Requirements—3101-3102-3103, 3104-3105-3106

One of the following sequences: 3421-3422 or 3511-3512

16 additional cr in 3xxx-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

Minor Requirements—3101-3102-3103
8 additional cr in 3xxx-5xxx Russian courses

B.A. Major Sequence—Russian Area Studies

Required Preparatory Courses—1101-1102-1103, 1104-1105-1106 or equiv

Major Requirements—Russ 3421-3422, Hist 3636-3637, a two-quarter sequence in social sciences (Geog 3181 or 5181, Pol Sci 5471 recommended), Russ 3511-3512, minimum of 12 cr from 3xxx- or 5xxx-level courses dealing with Russia, Russ 5504 or 5504H

Minor Sequence—Russian Area Studies

Required Preparatory Courses—1101-1102-1103 or equiv

Minor Requirements—Russ 3421 or 3422, Russ 3511 or 3512, Hist 3636 or 3637, Geog 3181 or Pol 5471, minimum of 4 cr from 3xxx- or 5xxx-level courses dealing with Russia

Russian (Russ)

1101f-1102w-1103s. BEGINNING RUSSIAN. (5 cr per qtr; five class meetings a 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 understanding Russian; reading contemporary texts.

3031, 3032. SCIENTIFIC RUSSIAN. (4 cr per qtr; prereq 3031 or Δ for 3032)
Study of Russian morphology, syntax, and scientific vocabulary to acquire reading competence in scientific Russian. Reading of texts in different scientific fields.

3101-3102-3103. THIRD-YEAR RUSSIAN. (4 cr per qtr; prereq 1106)
Conversation, composition, grammar review, translation, and readings in appropriate literature.

3104f. INTRODUCTION TO LITERARY ANALYSIS. (4 cr; prereq 3103)
Advanced composition and conversation. The structuralist 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 elements. Taught in Russian.

3106s. THE CURRENT SOVIET SCENE. (4 cr; prereq 3105)
Current Soviet values as reflected in literature, the press, and other media. Taught in Russian.

Major Requirements and Course Descriptions

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 department.

3311H. MAJOR PROJECT IN RUSSIAN. (2-4 cr; prereq #)

For description, see 3311.

3421. LITERATURE: MIDDLE AGES TO DOSTOEVSKY IN TRANSLATION. (4 cr, §5421; prereq 1106 or equiv for Russian maj, no prereq for others) Survey of Russian literature from about 1000 A.D. through the mid-19th century, emphasizing writers of first half of 19th century.

3422. LITERATURE: TOLSTOY TO SOLZHENITSYN IN TRANSLATION. (4 cr, §5422; prereq 1106 or # for Russian maj; no prereq for others) Russian literature from mid-19th century to present. Realism, modernism, socialist realism and other developments since 1917.

3511. RUSSIAN CULTURE TO THE MID-19TH CENTURY. (4 cr; prereq 1106 for Russian majors) Aspects of folk and "high" culture, their interrelationship 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 century 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.

5211. LITERATURE SINCE THE REVOLUTION IN TRANSLATION. (4 cr)

Literary merits as well as cultural and political significance of the important works of Soviet Russian literature (1917 to present) by officially accepted and dissident authors.

5401. DOSTOEVSKY IN TRANSLATION. (4 cr)
Novels.

5404. TOLSTOY IN TRANSLATION. (4 cr)
Novels, stories, and dramas.

5407. STORIES AND PLAYS OF ANTON CHEKHOV 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 about 1000 A.D. 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 SOLZHENITSYN 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.

5425. EARLY 19TH-CENTURY RUSSIAN LITERATURE: PUSHKIN, LERMONTOV, GOGOL IN TRANSLATION. (4 cr)

Major poetry and prose works significant for two main aspects: high artistic form and significance for the "Golden Age" of Russian poetry; introduction of characteristic elements of literary prose leading to the "Age of Realism."

5504. PROSEMINAR: SENIOR THESIS IN RUSSIAN AREA STUDIES. (4 cr)

Interdisciplinary proseminar to be taken the senior year in Russian area studies in conjunction with the writing of a senior paper. Integration of the knowledge and approaches of the various disciplines and application to the writing of a senior research paper.

5504H. HONORS COURSE: PROSEMINAR: SENIOR THESIS IN RUSSIAN AREA STUDIES. (4 cr)

For description, see 5504.

5701f, 5702w. 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)

3801. POSTWAR POLISH CULTURE. (4 cr)
Interaction of culture, literature, and politics on Poland since the end of World War II. Special attention to the effects of the war on Polish consciousness; the relation to the emergent socialist institutions; the thaw of 1956; and the growth of oppositional thought and literary practice.

5900. TOPICS. (4 cr)
Topics specified in the *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 [max 12 cr])
Topics specified in the *Class Schedule*.

5900. TOPICS IN RUSSIAN AND EAST EUROPEAN STUDIES. (4 cr per qtr [12 cr max])
Topics specified in the *Class Schedule*.

Sanskrit

See South and Southwest Asian Studies.

Scandinavian Studies

Staff—Chair, John G. Rice, 210B Folwell Hall; **Assistant Chair,** Poul Houe, 305A Folwell Hall; **Director of Undergraduate Studies,** Göran Stockenström, 305A Folwell Hall; **Director of Graduate Studies,** Kaaren Grimstad, 210A Folwell Hall
Professors: Cooperman (Sociology), Houe (Danish), Nelson (Art History), Rice (Geography), Simpson (Norwegian), Stockenström (Swedish)

Associate Professors: Grimstad (Old Norse, Swedish), Kvavik (Political Science), Metcalf (History), Mishler (Norwegian), Vähämäki (Finnish)

Assistant Professor: Tiblin (O.M. Wilson Library)

Adjunct Faculty: Karni (Extension Independent Study)

The Department of Scandinavian Studies teaches and conducts research in the languages and literatures 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. In addition, there is an interdisciplinary Scandinavian area studies minor.

General Education—Courses appropriate for nonmajors are Scan 1504, 3271, 3272, 3273, 3457, 3501, 3503, 3505, 3601, 3602, 3604, 3605, 3606, 3607, 3613, 3614, 3615, 3618, 3654, 5118, 5173, 5252, 5404, 5421, 5463, 5501, 5502, 5602, 5611, 5613, 5614, 5615, 5616, 5617, 5631, 5632, 5704, 5711, and 5712, 5772, 5773.

B.A. Major Sequence— Scandinavian Languages

Required Preparatory Courses—Dan, Nor, or Swed 1101-1102-1103; 1104-1105

Major Requirements—Dan, Nor, or Swed 1106, 3670 (3 qtrs)

Minimum of 32 cr in 3xxx-5xxx courses, to include 3273, 5704, 5970 (4 cr for major project, to be taken fall quarter before graduation), and 20 cr chosen with adviser approval

Minor Sequence— Scandinavian Area Studies

Required Preparatory Courses—Dan, Fin, Nor, or Swed 1101-1102-1103

Minor Requirements—*Humanities Option:* One approved Scan course, one approved ArH course, one additional approved humanities course, and three additional approved courses (at least two of which are from social sciences)

Social Science Option: Scan 3273, 5173, 5252, 5463, one additional approved social science course, and two additional approved humanities courses

A list of approved courses is available from the Department of Scandinavian Studies, 210 Folwell Hall, 625-9887.

Programs must be approved by the director of undergraduate studies. Up to 4 credits of 3xxx or 5xxx courses may be in directed study, and up to 4 credits may be taken S-N.

Major Requirements and Course Descriptions

Minor Sequence—Danish

Required Preparatory Courses—1101-1102-1103, 1104-1105

Minor Requirements—1106 and 12 cr of 3670

B.A. Major Sequence—Finnish

Required Preparatory Courses—1101-1102-1103, 1104-1105

Major Requirements—1106, 12 cr of 3670

Minimum of 32 cr in 3xxx-5xxx courses, to include Scan 3273, 3604, 3605, 5404, 5421, 5970 (4 cr for major project, to be taken fall quarter before graduation), and 8 cr chosen with adviser approval

Minor Sequence—Finnish

Required Preparatory Courses—1101-1102-1103, 1104-1105

Minor Requirements—1106 and 12 cr of 3670

Minor Sequence—Norwegian

Required Preparatory Courses—1101-1102-1103, 1104-1105

Minor Requirements—1106 and 12 cr of 3670

Minor Sequence—Swedish

Required Preparatory Courses—1101-1102-1103, 1104-1105

Minor Requirements—1106 and 12 cr of 3670

Scandinavian (Scan)

1504. SCANDINAVIAN IMMIGRANT CULTURE AND ITS BACKGROUND. (4 cr)
Cultural self-maintenance efforts of Scandinavian immigrants to the United States; immigrant literature. Readings in translation.

3001, 3002. SCANDINAVIAN LANGUAGES FOR READING I, II. (4 cr per qtr; prereq 3001 or knowledge of one Scandinavian language for 3002)
Development of reading knowledge of Danish, Norwegian, and Swedish through comparative and contrastive study of English and Scandinavian grammar and basic vocabulary. Basic comprehension and translation exercises, graded interdisciplinary readings in all three languages.

3271. THE VIKINGS AT HOME AND AWAY. (4 cr, §Hist 3271) 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.

3272. EARLY MODERN SCANDINAVIA TO 1807. (4 cr, §Hist 3272) Metcalf

The centralization of state power and the Reformation; struggle for control of the Baltic; Gustavus Adolphus and Charles XII; absolutism in the north; social and economic transformation of Scandinavia.

3273. MODERN SCANDINAVIA SINCE 1807. (4 cr, §Hist 3273) Metcalf

From agrarian periphery to vanguard welfare-state models; impact of industrialization, urbanization, and demographic expansion; social democracy and the politics of consensus.

3457. SWEDEN: SOCIAL STRUCTURE, SOCIAL CHANGE. (4 cr, §Soc 3457) Cooperman

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 post-modern values.

3501. INTRODUCTION TO SCANDINAVIA.

(4 cr) Houe
Cultural, social, and political developments; major cultural figures. Readings in translation.

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) Simpson

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) Vähämäki

Major literary works from the Middle Ages to the present.

3605. THE SCANDINAVIAN AND FINNISH SHORT STORY. (4 cr) Vähämäki

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.

3607. SCANDINAVIAN FILM, AN INTRODUCTION AND SURVEY. (4 cr) Mishler

From origins to present; major filmmakers and trends; introduction to relevant theoretical and critical literature.

3611. EXPRESSIONISM IN SCANDINAVIAN LITERATURE. (4 cr)

Development of literary expressionism in Scandinavia, from Strindberg to the present. Emphasis on Strindberg, Hamsun, and Pär Lagerkvist.

3612. PÄR LAGERKVIST. (4 cr) Simpson

Novels, stories, plays, and poetry of Pär Lagerkvist. Readings in English for nonmajors.

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.

3654. MAJOR ACHIEVEMENTS IN SCANDINAVIAN ART. (4 cr, §Arth 3654) Nelson

Painting, sculpture, architecture, and decorative arts of the upper classes in Scandinavia; emphasis on 17th and 18th centuries.

3670. TOPICS IN SCANDINAVIAN STUDIES. (4 cr per qtr)

Topics announced before first class meetings. 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.

5118. SCANDINAVIA IN THE MIDDLE AGES.

(4 cr, §Hist 5118, Geog 5178) Metcalf, Rice

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.

5173. GEOGRAPHY OF NORDEN. (4 cr, §Geog 5173) Rice

Physical and human geography of Sweden, Finland, Denmark, Norway, and Iceland, especially population change and settlement patterns.

5201. SCANDINAVIAN LITERATURE FROM THE LATE MIDDLE AGES TO THE ENLIGHTENMENT. (4 cr; prereq reading knowledge of a Scan language for Scan grad students)

From the 14th century to Bellman and Holberg.

5202. SCANDINAVIAN LITERATURE FROM ROMANTICISM TO THE MODERN BREAKTHROUGH. (4 cr; prereq reading knowledge of a Scan language for Scan grad students)

Romantic and early realistic authors.

5252. DEVELOPMENT OF THE SCANDINAVIAN WELFARE STATE. (4 cr, §Hist 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.

5404. HISTORY AND STRUCTURE OF FINNISH. (4 cr) Vähämäki

History and structure (phonology and syntax) of modern Finnish. Readings in translation for nonmajors.

5421. FINNISH FOLKLORE: THE KALEVALA. (4 cr; offered alt yrs) Vähämäki

The Finnish national epic from a folkloristic point of view. Readings in translation.

5463. GOVERNMENT AND POLITICS OF SCANDINAVIAN COUNTRIES. (4 cr, §Pol 5463; prereq Pol 3051 or non-political science grad or #)

Kvavik
Scandinavian political institutions and behavior; Scandinavian party politics, interest groups, and legislative behavior. Voting patterns and voter alignments. Emergence of social democratic state.

5501. SCANDINAVIAN MYTHOLOGY. (4 cr)

Grimstad
Scandinavian myths based on the Poetic Edda and the Prose Edda. 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 Icelandic; offered alt yrs) Grimstad

Representative skaldic poetry and its forms and method.

Major Requirements and Course Descriptions

5512. THE POETIC EDDA. (4 cr; prereq reading knowledge of Old Icelandic) Grimstad
Poems from the Poetic Edda (texts in Old Icelandic).

5602. FICTION AND FILM. (4 cr) Stockenström
Film adaptations of classical Scandinavian literary texts by major directors.

5611. SCANDINAVIAN LITERATURE IN ITS EUROPEAN CONTEXT: REALISM. (4 cr)
Stockenström

The breakthrough of realism in Scandinavian literature, in its European context. Representative European literary texts from the 19th century—dramas, novels, and criticism—read in translation.

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 century—dramas, novels, and criticism—read in translation.

5618. MODERN SCANDINAVIAN DRAMA. (4 cr)
Stockenström

Scandinavian plays from the 20th century.

5619. SCANDINAVIAN POETRY SINCE 1890.

(4 cr; prereq reading knowledge of a Scan language for Scan grad students) Houe, Mishler
Representative poets since 1890.

5631. 19TH-CENTURY SCANDINAVIAN NOVEL. (4 cr) Simpson

Development from beginnings to end of 19th century. Readings in translation for nonmajors.

5632. 20TH-CENTURY SCANDINAVIAN NOVEL. (4 cr) Simpson

Novels of Hamsun, Strindberg, Lagerkvist, others. Readings in translation for nonmajors.

5641. SCANDINAVIAN ART OF THE 19TH AND 20TH CENTURIES. (5 cr, §Arth 5641; prereq one ArtH course or #) Nelson

Painting, sculpture, architecture, and decorative arts; the rise of expressionism in the fine arts and of "Scandinavian modern" in design.

5644. MEDIEVAL ART OF SCANDINAVIA. (4 cr, §Arth 5644; prereq one ArtH course or #) Nelson
Migration, Viking, and Christian art in Scandinavia from the 5th through the 15th centuries. Architecture, sculpture, painting, and metalwork.

5645. FOLK ARTS OF SCANDINAVIA. (4 cr, §Arth 5645; prereq one ArtH or #) Nelson
Wood carving, metalwork, decorative painting, weaving, stitchery, and domestic architecture of rural Scandinavia; origins in pagan and medieval art.

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 Icelandic; 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.

5712. SCANDINAVIAN HISTORICAL LINGUISTICS. (4 cr; prereq introductory course in linguistics or #; offered alt yrs)

Internal history of Danish, Norwegian, and Swedish. Readings in translation for nonmajors.

5721-5722. MODERN ICELANDIC. (1 cr per qtr; prereq knowledge of Old Icelandic or §5701-5702; offered when feasible)

Phonology and grammar; reading of texts.

5772, 5773. SCANDINAVIAN HISTORY. (3 cr per qtr; prereq reading knowledge of one Scandinavian language or Finnish, #) Metcalf

Topics and chronological emphasis vary from year to year.

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)

1104-1105-1106. INTERMEDIATE DANISH. (5/4/4 cr; prereq 1103 or equiv)

Continued development of reading, writing, and speaking skills.

3670. READINGS IN DANISH LITERARY TEXTS. (4 cr per qtr [max 28 cr]; 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)

1104-1105-1106. INTERMEDIATE FINNISH. (5/4/4 cr; prereq 1103 or equiv)

Continued development of writing and speaking skills; problems and usage of Finnish grammar.

3001, 3002, 3003. READING FINNISH. (5 cr per qtr, \$1101, \$1102, \$1103)

Basic vocabulary, inflectional and derivational systems and syntax of Finnish with emphasis on reading comprehension; for students with little or no knowledge of Finnish.

3670. READINGS: FINNISH 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)

1104-1105-1106. INTERMEDIATE NORWEGIAN. (5/4/4 cr; 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.

Swedish (Swed)

1101f-1102w-1103s. BEGINNING SWEDISH. (5 cr per qtr)

1104-1105-1106. INTERMEDIATE SWEDISH. (5/4/4 cr; prereq 1103 or equiv)

Continued development of reading, writing, and speaking skills.

3670. READINGS IN SWEDISH LITERARY TEXTS. (4 cr per qtr [max 28 cr]; 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,* Candace Kruttschnitt, 1080 Social Sciences Building; *Director of Graduate Studies,* Joseph Galaskiewicz, 935 Social Sciences Building; *Director of Honors,* Robert Kennedy, 1125 Social Sciences Building

Professor Emeritus: Johnson

Professors: T. Anderson, Carter, J. Clark, Cooperman, Donohue, Ellenbogen, Fine, Finestone, Fulton, Galaskiewicz, Jasso, Knoke, Laslett, Leik, Malmquist, McTavish, Mortimer, Nelson, Reiss, Reynolds, Simmons, Thornton, Ward

Associate Professors: Aminzade, R. Anderson, Kennedy, Kruttschnitt, Spitzer

Assistant Professors: Brewer, Fischer

Adjunct Faculty—S. Clark (College of Education), Litman (School of Public Health), Samaha (History), 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 designed for students interested in a more rigorous concentration in research methodologies. 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, 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,

Major Requirements and Course Descriptions

special course registrations, and other undergraduate academic opportunities is available in the Undergraduate Advising office, 923 Social Sciences Building, (624-7326).

Directed Studies, Field Experience—

Students in sociology are encouraged to plan a field experience. Credit may be earned by proposing a directed studies project developed from the experience. Obtain a copy of *Procedures and Policies for Directed Studies and Research in Sociology* at the Undergraduate Advising office and consult the Office of Special Learning Opportunities, 220 Johnston Hall, for information about arranging internships.

General Education—1001, 1002, and 1003 deal with a broad sociological analysis of American social life; 1960 involves intensive consideration of specific aspects of society. Courses at the 3xxx and 5xxx levels focus on more advanced study in substantive areas.

B.A. Major Sequence

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)

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, 5161, 5162

Major project (see advising office for details)

B.S. Major Sequence

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

27 cr in supportive field courses; areas that may be included are mathematics, symbolic logic, computer programming, linguistics, psychometrics, econometrics, philosophy of science. See the advising office for a list of approved courses.

Minor Sequence— General Sociology

Required Preparatory Course—1001

Minor Requirements—3201, 3401, 3801; one theory course chosen from 5701, 5703, 5705, or 5711; 4 cr in a 3xxx or 5xxx sociology course

Minor Sequence—Aging

Required Preparatory Course—1001

Minor Requirements—3201 or 5201, 3401 or 5401, 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 or 5201, 3401 or 5401, 3501, 5505; one sociology course chosen from 5441, 5511, 5524, 5939, 5952

Minor Sequence— Political Sociology

Required Preparatory Course—1001

Minor Requirements—3401 or 5401,
3405, 3801, 5311, 5755

Minor Sequence— Rural Sociology

Minor Requirements—3551, 5651,
5661, 5675; one theory course chosen from
5701, 5703, 5705, or 5711

Minor Sequence— Social Organization

Required Preparatory Course—1001 or 1001H

Minor Requirements—3401 or 5401,
3405 or 5405, 5411; one theory course cho-
sen from 5701, 5703, 5705, or 5711; one so-
ciology course from approved list,
available in advising office

Minor Sequence— Social Psychology

Required Preparatory Course—1001

Minor Requirements—3201 or 5201,
3214, 5205, 5211 or 5215; one theory
course chosen from 5701, 5703, 5705, or
5711

Minor Sequence— Urban Sociology

Required Preparatory Course—1001 or 1002

Minor Requirements—3401 or 5401,
3601, 5601, 5605; one theory course cho-
sen from 5701, 5703, 5705, or 5711

General

1001f,w,s. 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.

1001H. HONORS COURSE: INTRODUCTION TO SOCIOLOGY. (4 cr) Carter, Fine, Thornton For description, see 1001.

1002f,w,s. AMERICAN COMMUNITY. (4 cr)

Aminzade, Cooperman, Kennedy
Sociological analysis of modern American society. Dis-
tribution of population, urban-rural differences, social
factors in business systems, occupational groups, de-
termination of social status, minority group adjust-
ment.

1003. SOCIAL PROBLEMS. (4 cr) Clark, Fine
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 prob-
lems, and pollution.

Criminology and Deviance

Some courses in this section were for-
merly taught in the Department of Crimi-
nal 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.

3101. INTRODUCTION TO AMERICAN CRIMI-
NAL JUSTICE. (4 cr, §CJS 3101) Kruttschnitt, Ward
Components and dynamics as well as philosophical
underpinnings of the criminal justice system.

3102. INTRODUCTION TO CRIMINAL BEHAV-
IOR AND SOCIAL CONTROL. (4 cr; prereq 3101)
Kruttschnitt, 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
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
Nature and types of crime, problems in measurement
of incidence and trends, and review of sociological the-
ories of crime causation. Implications for crime pre-
vention and control.

5104. COMMUNITY-BASED CORRECTIONS.
(4 cr, §CJS 5113; prereq 3102 or #)
Theories behind and structures of diversion, proba-
tion, parole, and other community corrections pro-
grams that exist as alternatives to imprisonment.

Major Requirements and Course Descriptions

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 #)

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 #) Kruttschnitt
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 #) Finestone
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 #) 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) Clark, 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) Clark

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) Clark, Finestone

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) 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, 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 student) Malmquist
Psychiatric and psychological aspects of antisocial and criminal behavior as related to issues faced in the courts and criminal justice system.

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.

Sociology and Religion

5151. RELIGION AS A SOCIAL INSTITUTION.

(4 cr; prereq 8 cr in social science or #) 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.

Social Psychology

3201. PRINCIPLES OF SOCIAL PSYCHOLOGY.

(5 cr; prereq 1001) Fine, 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 #) Fine, Mortimer, Spitzer
For description, see 3201.

3214. UNDERSTANDING EVERYDAY LIFE.

(4 cr; prereq soph, jr or sr) Reynolds, 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).

5201. INTRODUCTION TO SOCIAL PSYCHOLOGY.

(4 cr [no cr for sociology majors]; prereq 8 cr in sociology, anthropology, psychology, political science or economics) Fine, Mortimer, Reynolds, Spitzer
Research and theory regarding relation of individual social groups. Socialization processes; effects of social interaction and isolation; individual behavior under conditions of social organization and disorganization; cultural influence and its limits.

5205. SYMBOLIC INTERACTION. (4 cr; prereq 3201 or 5201 or equiv or #) Finestone
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 #) R Anderson, Reynolds
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 student, 16 cr in social science and/or education or #) Simmons, 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.

Social Change and Social Movements

3315. LATIN AMERICAN SOCIETIES IN TRANSITION. (4 cr; prereq 8 cr in sociology, economics, anthropology or political science or #) Carter, Ellenbogen
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.

5301. SOCIAL MOVEMENTS IN A CHANGING SOCIETY. (4 cr; prereq 3401 or 5401 or equiv or #) Aminzade
Factors underlying social change in modern mass society. Recent research on social movements, reform and revolution, culture contact, impact of rapid technological change. Individual and social structures under rapid social change.

5311. SOCIOLOGY OF CONFLICT. (4 cr; prereq 3401 or 5401 or equiv or #) Cooperman
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.

Popular Culture and Public Opinion

3352. SOCIOLOGY OF CULTURAL FORMS. (4 cr) Fine
Social development and usage of cultural forms, including art, music, theatre, popular arts, folk arts, and forms of social communication.

5351. SOCIOLOGY OF POPULAR CULTURE. (4 cr; prereq 16 cr in sociology or #) Fine
Social preconditions and social effects of popular culture. Popular vs. non-popular culture; selected popular arts.

5355. OPINION AND COMMUNICATION: SOCIAL FACTORS. (4 cr; prereq 16 cr in sociology or #) Carter
Opinion formation and change in relation to individual characteristics and social structure; flow of public communications through society; impact of communication on audiences.

Social Organization and Social Structure

3401. PRINCIPLES OF SOCIAL ORGANIZATION. (5 cr; prereq 1001, 3801 or equiv) Galaskiewicz, Mortimer, Nelson
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.

3401H. HONORS COURSE: PRINCIPLES OF SOCIAL ORGANIZATION. (5 cr; prereq sociology honors student, 1001 or 1001H or #) Galaskiewicz, Mortimer
For description, see 3401.

3405. INEQUALITY: INTRODUCTION TO STRATIFICATION. (4 cr; prereq 1001) T Anderson, Fulton, Nelson
Inequality—causes and consequences. Inequality in American society. Related concepts of class, class cultures, status aggregates; the social forms of inequality, their consequences for life changes and styles.

3411. UNDERSTANDING FORMAL ORGANIZATION. (4 cr; prereq 1001) Clark
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 inter-organizational sets and relationships.

3456. WESTERN EUROPEAN SOCIETIES. (4 cr) Cooperman
Comparative analysis of Western European societies. Examination of current social-economic trends with regard to population composition, ethnic patterns, economic organization and social structure, class, mobility and status, family and gender, city life and culture.

Major Requirements and Course Descriptions

3457. SWEDEN: SOCIAL STRUCTURE, SOCIAL CHANGE. (4 cr, §Scan 3457) 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 post-modern values.

5401. SOCIAL ORGANIZATION. (4 cr [no cr for sociology majors]; prereq 8 cr in sociology, anthropology, psychology, political science or economics)
Galaskiewicz, Mortimer
Theories of social structure, social stratification, community structure, status groups, the nature of social power, social control processes, aspects of formal organizations, and rational actor models for decentralized social processes.

5405. SOCIAL STRATIFICATION AND MOBILITY. (4 cr; prereq 3401 or 3405 or 5401 or any 3xxx sociology course or equiv or #...some statistics recommended) Fulton, 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 in sociology, anthropology, psychology, political science or economics or #) Reynolds
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.

5415. COMPARATIVE SOCIAL STRUCTURE. (4 cr; prereq 20 cr in sociology, economics or political science or #) Cooperman
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.

5421. OCCUPATIONAL SOCIOLOGY. (4 cr; prereq 3201 or 3401 or 3405 or 5201 or 5401 or equiv or #) Mortimer
Individual motivations and reactions to work; nature of professions and other occupational types; relations between occupational and organizational norms and values, between occupations and social structure—stratification system, family, political system, technological change; changes in composition of labor force.

5441. WORK-FAMILY LINKAGES. (4 cr; prereq 8 cr in sociology or #) 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.

5477. HISTORICAL SOCIOLOGY. (4 cr; prereq social theory course or Hist 3955 or #) Aminzade, Laslett
Introduction to historical sociology focusing on the way in which historians employ social theory in their research and the efforts of sociologists to develop historically informed social theory.

Family Sociology

3501. THE FAMILY SYSTEM. (4 cr; prereq 1001 or #) Laslett, 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) Fischer
Sociological perspectives on sexual socialization; ideas of masculinity and femininity; history and functions of love and romance; characteristics of romantic relationships, intimacy, emotionality, sexuality, exclusivity; sexual deviance in relation to sexual norms.

5505. FAMILY DEVELOPMENT. (5 cr; prereq 1001, 3201 or 5201 or equiv, CPsych 1301 or #) Fischer, Leik
The natural history of families—how they form, function, and achieve distinctive identities. Developmental growth of children and parents in interaction in seven stages of the family life cycle, from engagement planning to family dissolution.

5511. COMPARATIVE GENDER ROLES. (4 cr; prereq 8 cr in sociology or #) Reiss
Comparison of gender roles in various parts of world. Reliance on sociological and anthropological research outside the Western world with comparisons to Western systems. Place of gender roles in overall kinship systems and among other major institutions (economic, political, religious).

5524. SOCIOLOGY OF HUMAN SEXUALITY. (4 cr; prereq 8 cr in sociology or #) Reiss
Examination of human sexuality from a social perspective. How sexual preferences develop, trends in sexual relationships in various parts of our society, and social factors affecting sexual permissiveness.

Demography

3551f.w. WORLD POPULATION PROBLEMS. (4 cr) Kennedy, Thornton
Population growth and natural resources, population dynamics, fertility and mortality in less developed nations, population forecasts, population policies to reduce fertility.

5555. POPULATION THEORY. (4 cr; prereq 3551 or #) T Anderson, 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 #) Kennedy
Demographic measures and concepts of fertility, mortality, and migration. Stable population methods, demographic estimates from incomplete data.

5571. HISTORY OF AMERICAN INDIAN POPULATIONS. (4 cr, §Hist 5009) Thornton
Population (demographic) history of American Indians in the U.S. Focus on pre-European contact, drastic decline from first European contact and recent partial recovery.

Urban Sociology

3601. URBAN COMMUNITY. (4 cr; prereq 1001 or 1002) Cooperman, Galaskiewicz
Urban community patterns. Comparison of social interaction in neighborhood, city, and metropolis. Community studies. Urban power structures. Settlement patterns, organization of social life and urban problems.

5601. URBAN SOCIOLOGY. (4 cr; prereq 3401 or 3405 or 5401 or equiv or #...some statistics recommended) T Anderson, Cooperman
Cities, urban ecology, urban institutions, and the urban way of life.

Rural Sociology

1651. RURAL SOCIOLOGY. (4 cr) Donohue
Factual data necessary to understand problems of rural social life.

3671. COMPARATIVE RURAL SOCIETIES: LATIN AMERICA. (4 cr; prereq 8 cr in sociology, anthropology, economics or political science or #) Carter, Ellenbogen
Social and cultural change in Latin America. Demographic and ecological characteristics, institutional structure and its accompanying associations; linkages with outside and world views.

5651. RURAL SOCIAL INSTITUTIONS. (4 cr; prereq any 3xxx sociology course or equiv or #) Donohue
Factors in the rural environment that condition the functioning of rural social institutions—family, school, church, local government, health, welfare.

5661. RURAL COMMUNITY ANALYSIS. (4 cr; intended for persons in rural community organization, rural teaching, extension work, and related fields; prereq any 3xxx sociology course or equiv or #) Donohue
Tools, techniques, and methods of making community field studies.

5675. WORLD FOOD SUPPLY PROBLEMS. (3 cr, §AgEc 5790, §Agro 5200, §FScN 5643, §PIPa 5220, §LACS 5280; prereq major in agriculture, veterinary medicine, nutritional sciences, social science field or #...grad students by Δ only) Ellenbogen
Multidisciplinary approach to social, economic, and technical problems of feeding the world's growing population. Principles sought from the social and economic sciences. Principles from the plant, animal, and nutritional sciences and their application to food problems.

Social Theory

5701. ANALYTICAL SOCIAL THEORY. (4 cr; prereq 8 cr in social science or #) Cooperman, Jasso
Major problems of sociological theory; main types: positivistic, rationalistic, idealistic; major theoretical concepts.

5703. SOCIAL LIFE AND CULTURAL CHANGE. (4 cr; prereq 8 cr in social science or #) Donohue, 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 in social science or #) Laslett
Major trends of social thought from Renaissance to 19th century; origins of sociology.

5711. ELEMENTS OF SOCIOLOGICAL ANALYSIS. (4 cr; prereq 8 cr in social science or #) Reynolds
Premises upon which social theories are developed. Construction of social theory.

Sociology of Political and Legal Institutions

5755. SOCIAL STRUCTURE AND POLITICAL BEHAVIOR. (4 cr; prereq 3401 or 5401 or equiv or #) Aminzade, Galaskiewicz
Structural and ideological conditions influencing the legitimation of political institutions; relationships to political participation, political apathy, and the rise of mass movements.

Methodology

3801f.w. SOCIOLOGICAL METHODS I: DESCRIPTIVE STATISTICS. (5 cr; prereq basic algebra or Math 0009) T Anderson, Leik, McTavish
Descriptive statistics in analysis of sociological data, measures of central tendency, deviation, correlation and regression graphs, simple treatment of three and four variables, probability.

3801H. HONORS COURSE: SOCIOLOGICAL METHODS I: DESCRIPTIVE STATISTICS. (5 cr; prereq basic algebra or Math 0009, #) T Anderson, Leik, McTavish
For description, see 3801.

3802w.s. SOCIOLOGICAL METHODS II: STATISTICAL INFERENCE. (5 cr; prereq 3801 or equiv) T Anderson, Jasso, Leik, 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 #) T Anderson, Leik, McTavish
For description, see 3802.

Major Requirements and Course Descriptions

3803f.s. SOCIOLOGICAL METHODS III: RESEARCH METHODS. (5 cr; prereq 3801, 3802 or equiv or #) R Anderson, McTavish

Data collection methods; advantages and limitations of major methods when applied to specific types of problems.

3803Hs. HONORS COURSE: SOCIOLOGY RESEARCH METHODS. (5 cr; prereq 3802H or equiv or #)

Major principles of research design and analysis focusing on participant observation and survey design and analysis. Practice in data collection and analysis.

3811f.w. COMPUTER USAGE FOR SOCIAL STATISTICS. (1 cr; S-N only; §3801 recommended)

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) R Anderson

Basic concepts of information processing for social science research; elementary computer programming; practice in the use of computers for data analysis in social science; problems of computer usage in sociology.

5812. CONTENT ANALYSIS METHODS. (4 cr; prereq 3803 or equiv or #) McTavish

Content analysis methods used in social science 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.

5821. EVALUATION RESEARCH. (4 cr; prereq 3801, 3802, 3803 or #)

Evaluation methodology, steps in conducting evaluations of education and social action programs; special problems in evaluation research; differences between evaluation research and basic research. Preparation of students to conduct evaluation research.

Sociology of Health and Health Care

5855f.s. SOCIOLOGY OF MEDICINE AND HEALTH CARE: AN INTRODUCTION TO MEDICAL SOCIOLOGY. (4 cr, §PubH 5790; prereq jr, sr or grad student) 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.

Gerontology and Thanatology

3937. SOCIAL GERONTOLOGY: ELDERS IN AMERICAN SOCIETY. (4 cr; prereq 1001 or #)

Fischer, McTavish
Situations and problems facing aging people in modern societies. Aspects of human aging from a sociological perspective.

5938. AGING AND THE LIFE COURSE. (4 cr; prereq 3201 or 5201, 3401 or 5401, 3937 or equiv or #) McTavish

Theories of aging, age stratification, generational change; comparative study at organizational and individual levels.

5939. AGING AND INTERGENERATIONAL DYNAMICS. (5 cr; prereq 3937 or #) Fischer

Relationships between adult children and their parents; variations in intergenerational relations; development and the linked life course; kinship vs. friendship; and aging families in past times. Lecture/seminar format, group projects with additional hour scheduled for group projects, discussions.

5956. SOCIOLOGY OF DEATH. (4 cr; prereq jr or sr, 8 cr in sociology or #) Fulton

Issues and problems that mortality presents in contemporary society.

Other Areas

3951. COMPARATIVE ETHNIC GROUP RELATIONS. (4 cr; prereq 1001 or #) 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.

5952. YOUTH IN MODERN SOCIETY. (4 cr,

§SPFE 5125; prereq 1001 or equiv or #) S Clark
Youth in advanced societies; youth as a social entity; functions of youth in industrial societies; roles in family, education, politics and government, economy and work, welfare and religion; youth organizations, social movements and subcultures; empirical research and cross-cultural perspectives.

5953. SOCIOLOGY OF EDUCATION. (4 cr, §SPFE 5190; prereq 1001 or equiv or #) S Clark

Advanced studies. School as socialization process, social structure of education, role of school in social change, other areas. Theory and empirical research.

5954. SOCIOLOGY OF GENDER. (4 cr; prereq 8 cr in social sciences or #) Fischer, Laslett

Analysis of the social organization and construction of gender roles and relationships; historical and feminist perspectives on the contemporary organization of gender relations; alternative conceptions and approaches.

5958. SOCIOLOGY OF HIGHER EDUCATION. (4 cr, §SPFE 5192; prereq 1001 or equiv or #) S Clark

Social aspects of higher education: socialization of students, comparative institutional organization, role structure, others. Theory and empirical research.

Special Courses

1960. TOPICS IN SOCIOLOGY. (1-4 cr per qtr; prereq 1001)

Special one-time offerings for freshmen and sophomores; topics specified in the *Class Schedule*.

3960. TOPICS IN SOCIOLOGY. (1-5 cr per qtr; prereq 1001)

Special one-time offerings for juniors and seniors; topics specified in the *Class Schedule*.

3966. MAJOR PROJECT SEMINAR. (4 cr; prereq 3801 and 3802 or 3803, preferably all three)

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; prereq #)

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.

3991. JUNIOR HONORS SEMINAR. (1-4 cr; prereq jr or sr sociology honors student and #) Fine Meetings with different faculty members discussing their areas of research interest. Initial organization of the students' honors thesis projects.

5960. TOPICS IN SOCIOLOGY. (1-5 cr per qtr; prereq 1001)

Special one-time offerings for juniors, seniors, and graduate students; topics specified in the *Class Schedule*.

5970f,w,s. DIRECTED STUDIES. (1-15 cr per qtr; prereq #)

Guided individual reading or study.

South and Southwest Asian Studies

Staff—Chair, William W. Malandra, 194 Klaeber Court; **Director of Undergraduate Studies,** Paul Staneslow, 185 Klaeber Court

Professors: Asher, Barker, Farah, Johnson, Kopf, Krislov, Lincoln, Schwartzberg, Spencer, Tapp, Junghare

Associate Professors: Bashiri, Malandra, Miranda, Sampson

Assistant Professors: Ash Shareef, Staneslow

Programs of the Department of South and Southwest Asian Studies focus on the languages, literatures, cultural traditions, and contemporary problems of Bangladesh, India, Pakistan, Turkey, Iran, and the Arab world. Flexible major and minor programs in Middle Eastern

and South Asian Studies are intended to meet the needs and interests of individual students. A brochure describing these programs may be obtained from the department office, 192 Klaeber Court.

General Education—Courses under the headings Middle East (MidE) and South Asian Studies (SoAS), given in English translation, are suitable for nonmajors.

B.A. Major Sequence—Middle Eastern and South Asian Studies

Major Requirements—*Language and Literature Option*: two years (six quarters) in one language of the Middle East and South Asia

Four 3xxx-5xxx level literature courses

Two 3xxx-5xxx level religion and philosophy courses

Three 3xxx-5xxx level social science and history courses

Area Studies Option: Three 3xxx-5xxx level literature courses

Two 3xxx-5xxx level religion and philosophy courses

Four 3xxx-5xxx level social science and history courses

If you are pursuing the area studies option, you are urged, but not required, to fulfill the CLA language requirement with study of a Middle Eastern or South Asian language.

Programs for both options must be designed in consultation with the director of undergraduate studies.

Minor Sequence—Middle Eastern and South Asian Studies

Minor Requirements—five 3xxx-5xxx level courses with a minimum of one course from literature and one from social science and history

If you are pursuing a minor in Middle Eastern and South Asian Studies, you are urged to fulfill the CLA language requirement with a language offered by this department.

Major Requirements and Course Descriptions

Arabic (Arab)

A Semitic language, Arabic is spoken by approximately 140 million Arabs in Saudi Arabia, Jordan, Lebanon, Syria, Iraq, Egypt, and parts of North Africa. Literary Arabic conforms to the classical standards of the Qur'an.

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)

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

3011-3012-3013. INTERMEDIATE ARABIC. (4 cr per qtr; prereq 1103 or #)

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

5014. STRUCTURE OF ARABIC. (4 cr; prereq 2 yrs of Arabic or #)

Main structure of Arabic, classical and colloquial.

5111-5112-5113. ADVANCED LITERARY ARABIC AND COMPOSITION. (5 cr per qtr; prereq 3013 or #)

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

5121. READINGS IN ISLAMIC THEOLOGICAL AND PHILOSOPHICAL TEXTS. (4 cr; prereq 5013 or #)

5211-5212. READINGS IN CLASSICAL ARABIC LITERATURE. (4 cr per qtr; prereq 5013 or #)

5231. ARABIC LITERATURE IN THE 19TH-20TH CENTURIES. (4 cr; prereq 5013 or #)

5900. TOPICS: READINGS IN ARABIC TEXTS. (4 cr per qtr [12 cr max]; prereq 5013 or #)

Reading and discussion of selected classical works in Arabic. Topics specified in *Class Schedule*.

5970. DIRECTED READINGS. (Cr ar; prereq 5013 or #)

Special problems for advanced students. Reading and periodic consultations.

Hindi (Hndi)

Hindi and Urdu (see below) are spoken by approximately 265 million people in South Asia. Hindi is considered of pan-Indian significance.

1101f-1102w-1103s. BEGINNING HINDI. (5 cr per qtr) Staneslow

5131f-5132w-5133s. INTERMEDIATE HINDI. (5 cr per qtr; prereq 1103 or #) Staneslow

5161f-5162w-5163s. ADVANCED HINDI. (4 cr per qtr; prereq 5133 or #) Junghare, Staneslow

5702. STRUCTURE OF HINDI. (4 cr per qtr; prereq 5133 or #) Junghare, Staneslow
The history and structure of Hindi with attention to syntactic and semantic structure.

5710. TOPICS IN HINDI LANGUAGE AND LITERATURE. (5 cr per qtr; prereq # for nonmajors) Junghare, Staneslow
Topics in the linguistic structure of Hindi or Hindi literature.

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 53 million people in India.

5970. DIRECTED READINGS. (Cr ar; prereq #) Junghare
Guided individual reading or study.

Middle Eastern (MidE)

1536. THE RELIGION OF ISLAM. (4 cr, §RelS 1036) 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' and Black Muslim components; reformist movements and change.

3211. ARABIC LITERATURE IN TRANSLATION: PRE-ISLAMIC TO 1500. (4 cr)

Golden age of Arabic poetry: poets, themes and trends; new developments in the classical age; the rise of belletristic writings; prose styles; folk literature; selected readings from Bidpai Fables and the Arabian Knights; narrative genres, sacred and profane.

3212. ARABIC LITERATURE IN TRANSLATION: THE REVIVAL AGE, 1800 TO PRESENT. (4 cr)

Revivalist and rejuvenative trends in poetry; the free verse movements, poets and themes; poetry of social consciousness; the novel, novella, short stories; leading fiction and drama writers.

3213. THE QUR'AN AS LITERATURE. (4 cr)
Texts and commentaries in translation. Knowledge of Arabic not required.

3301. HISTORY OF THE ANCIENT MIDDLE EAST. (4 cr) Farah

The history of the Semites of pre-Islamic age: their origins, ethnological relationship, religions, societies and civilization. Two or three lectures on communications between Chinese and Arabs and Jews in ancient times.

3491. CLASSICAL HERITAGE OF ARAB ISLAM. (4 cr, §Hist 3491) Farah

Legacy of Arab contribution in institutions, letters, arts, sciences, thought, mathematics, architecture, to Islam's efflorescence; points of contact with and transmission to Europe: crusades, Spain, Sicily. The role of Arab Islam in shaping an Islamic civilization, 6540-1350 A.D.

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.

3507. RELIGION AND POLITICS IN ISLAM: PAST AND PRESENT. (4 cr)

Trends of Islamic political thought from the classical to modern times; Muhammad the prophet and the statesman; the views of various political theorists in the Arab lands, in Iran and India; struggle between religious and "secular" forces to shape the character of government in various lands in response to socio-political situations; creation of the state of Pakistan in the name of Islam; and the Iranian Islamic revolution.

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) Bashiri

Iranian civilization from the Archaemenids to the rise of the Samanids; the role of the common person.

3512. MODERN IRAN. (4 cr) Bashiri

From the fall of the Samanids to the present; the role of the common person.

3541, 3542, 3543. HISTORY OF THE ARABS. (4 cr per qtr) 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 modern times.

3544. THE ARAB WORLD IN RECENT TIMES.

(4 cr, §Hist 3544) Farah
The central Arab lands (the Arabian peninsula, Iran, Syria, Jordan, Lebanon, Egypt) and the North African region (Libya, Tunisia, Morocco, Algeria) from end of World War I to the present. Foreign occupation and the struggle for independence; position and regional and international politics.

3555. ZOROASTRIANISM. (4 cr) Bashiri, Malandra

Historical survey from the prophet Zarathustra to modern survivals in Iran and India.

3601. PERSIAN FICTION IN TRANSLATION.

(4 cr, §MidE 5601) Bashiri
Major Persian works: *The Blind Owl* by Hedayat, *The Patient Stone* by Chubak, and *The Wedding* by Se'edi.

3602. PERSIAN POETRY IN TRANSLATION.

(4 cr, §MidE 5602) Bashiri
Major poetic works of Iran: quatrains of Omar Khayyam, sonnets of Hafiz; "new" Persian poetry such as the works of Forugh Farokhzad.

3612. CONTEMPORARY IRANIAN SOCIETY.

(4 cr)
Survey of ancient and medieval Iranian institutions and their impact on the ethnic, social, and political dynamics of contemporary Iran (and the Middle East).

5505. SURVEY: THE MIDDLE EAST. (4 cr, §MidE 3505, §Hist 3505) Farah

Cultural, religious, and scholarly achievements of Middle Eastern peoples from pre-Islamic times to the present.

5508. ISLAM: IRAN TO INDIA. (4 cr, §MidE 3508)

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.

5521. THE MIDDLE EAST IN WORLD AFFAIRS: OTTOMAN-PERSIAN SPHERE, 1300-1789. (4 cr) Farah

Rise and success of the Il-Khanid, Timurid and Safawid civilizations in Persia and of the Ottoman in West Asia: historical, institutional, cultural, socioeconomic development; contacts with the West.

5523. THE MIDDLE EAST IN WORLD AFFAIRS: THE 19TH CENTURY. (4 cr)

Structure of society; cultural and political impact of the West; revivalist and nationalist trends; reformist and separatist movements.

5525. THE MIDDLE EAST IN WORLD AFFAIRS: THE ARAB WORLD, TURKEY AND IRAN, 1915 TO THE PRESENT. (4 cr) Farah

Struggle for independence; rise of Turkey and Iran; problems of social, cultural, economic, and political development; modernizing trends; role in international affairs.

5546. THEOLOGICAL AND MYSTICAL DOCTRINES OF ISLAM. (4 cr) 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.

Major Requirements and Course Descriptions

5601. PERSIAN FICTION IN TRANSLATION.

(4 cr, §3601) Bashiri

Major Persian works: *The Blind Owl* by Hedayat, *The Patient Stone* by Chubak, and *The Wedding* by Se'edi.

5602. PERSIAN POETRY IN TRANSLATION.

(4 cr, §3602) Bashiri

Major poetic works of Iran: quatrains of Omar Khayyam, sonnets of Hafiz; "new" Persian poetry such as the works of Forugh Farokhzad.

5970. DIRECTED STUDIES. (Cr ar)

Guided individual reading or study.

5990. DIRECTED STUDIES. (Cr ar)

South Asian Studies (SoAS)

1504. INTRODUCTION TO THE RELIGIONS OF SOUTH ASIA.

(4 cr, §RelS 1031) Malandra

Introduction to Hinduism, Buddhism, and Janism.

1506. INTRODUCTION TO CONTEMPORARY SOUTH ASIA.

(5 cr, §3506) Schwartzberg

Land, people, modern historical development, contemporary problems, global setting, and future outlook of South Asia.

3204. FOLKLORE OF INDIA.

(4 cr) Junghare

Main genres of Indian folklore: folk tales, folk songs, folk epics, folk dramas, proverbs, and riddles; their relationship to the Indian society and interrelationship with the literary traditions, both great and small.

3411. INTRODUCTION TO INDIAN PHILOSOPHY.

(4 cr, 5411) Junghare

Major concepts; principal schools of Indian philosophy; traditional and contemporary views.

3412. HINDUISM.

(4 cr; prereq 1504 or 3411 or RelS 1031 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) Junghare

Historical account of the Buddhist religion in terms of its rise, development, various schools and common philosophical concept. Focuses on Indian Buddhism, compares it with Hinduism, and discusses its demise and revival on the Indian subcontinent.

3456. THE CINEMA OF INDIA.

(4 cr) A survey of the cinema of South Asia from aesthetic, social, economic, and political perspectives.

3501, 3502. THE HERITAGE OF INDIA.

(4 cr per qtr, §Hum 1211, 1212)

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, §1504) Schwartzberg

Land, people, modern historical development, contemporary problems, global setting, and future outlook of South Asia.

3521. GANDHI AND NON-VIOLENT REVOLUTION.

(4 cr)

The character of the man, his influence over contemporaries, and his hold on the world today.

3556. WOMEN IN INDIA: ROLE AND REPRESSION.

(4 cr) Junghare

Question of whether Indian women are repressed studied through literature of contemporary Indian women and against the background of traditional Indian values and roles.

5011. INDO-ARYAN LINGUISTICS.

(4 cr)

Phonological, morphological, and syntactic developments; Indo-European, Old Indo-Aryan, Hindi, and other major modern Indo-Aryan languages.

5090. INSTRUCTION IN SOUTH ASIAN LANGUAGE.

(5 cr; offered when feasible)

5201. ANCIENT INDIAN LITERATURE IN TRANSLATION.

(4 cr)

Literary achievements of the Indian civilization from the ancient period.

5202. MODERN INDIAN LITERATURE IN TRANSLATION.

(4 cr)

Literary achievements of the Indian civilization from the modern period.

5203. COMPARATIVE INDIAN LITERATURE IN TRANSLATION.

(4 cr)

Comparative Indian literature in the modern period.

5411. INTRODUCTION TO INDIAN PHILOSOPHY.

(4 cr, §3411) Junghare

Major concepts; principal schools of Indian philosophy; traditional and contemporary views.

5500. PROBLEMS IN INDIAN PHILOSOPHY.

(4 cr, §Phil 5801, prereq 5 cr of philosophy and 4 cr of Indian philosophy or religion or #)

Problems of philosophy in India; special attention to analyses of mind and knowledge.

5520. STUDIES IN THE RELIGIONS OF INDIA.

(Cr ar)

Topics in India's religious history.

5531, 5532. CULTURAL HISTORY OF NORTH INDIA, 1000-1707.

(4 cr per qtr; prereq course in Indian civilization, medieval Indian history or #)

India in the Muslim period. Developments in Indian Islam. analysis of such syncretic movements as Sikhism.

5535. TRIBAL PEOPLES AND CULTURES OF SOUTH ASIA.

(5 cr; prereq 1504, 1506, 3501, or 3506 rec)

Major populations; social and political organization of tribal groups; social change and effects of contact with Hindu caste society; world view of tribal groups as expressed in literature and religious symbolism.

5710. SEMINAR IN SOUTH ASIAN LANGUAGES AND LITERATURE.

(Cr ar)

5970. DIRECTED STUDIES.

(Cr ar)

Guided individual reading or study.

5990. DIRECTED RESEARCH.

(Cr ar)

Persian (Per)

Persian, the language of Iran, is spoken in western Afghanistan, Soviet Tadzhikistan, and to a degree in Pakistan. Classical Persian is used by Indian Muslims as a literary language.

1101-1102-1103. BEGINNING PERSIAN. (5 cr per qtr) Bashiri
Audiolingual course in spoken and written modern Persian.

3011-3012-3013. INTERMEDIATE PERSIAN. (4 cr per qtr; prereq 1103 or #) Bashiri
Grammar drills, reading, and discussion, in Persian, of graded texts in modern Persian.

5011. STRUCTURE OF PERSIAN. (4 cr; prereq 3013 or #) Bashiri
Phonology, morphology, and syntax; linguistic skills necessary for understanding modern standard Persian.

5900. READINGS IN AN IRANIAN LANGUAGE. (1-4 cr per qtr [12 cr max]; prereq 3013 or #)
Reading and discussion of selected premedieval 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.

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) Malandra

5161f-5162w-5163s. ADVANCED SANSKRIT. (4 cr per qtr; prereq 5203)

5201f-5202w-5203s. INTERMEDIATE SANSKRIT. (5 cr per qtr; prereq 5133 or #) Malandra

5320. READINGS IN PHILOSOPHICAL TEXTS. (4 cr per qtr; prereq 5133) Junghare, Malandra
Readings in representative text material.

5710. TOPICS IN SANSKRIT LANGUAGE AND LITERATURE. (5 cr per qtr) Junghare, Malandra
The linguistic structure of Sanskrit or Sanskrit literature. Topics vary from quarter to quarter.

5970. DIRECTED READINGS. (Cr ar; prereq #)
Staff
Guided individual reading or study.

5990. DIRECTED RESEARCH. (Cr ar; prereq #)
Staff

Turkish (Turk)

Turkish, primarily the language of Turkey, is also 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.

Urdu (Urdu)

The Urdu language is the form of Hindi that emerged primarily among the Muslims in India.

1101f-1102w-1103s. BEGINNING URDU. (5 cr per qtr) Barker

5131f-5132w-5133s. INTERMEDIATE URDU. (5 cr per qtr; prereq Hindi 1103 or #) Barker

5161f-5162w-5163s. ADVANCED URDU. (4 cr per qtr; prereq 5133 or #) Alvi, Barker

5970. DIRECTED READINGS. (Cr ar; prereq #)
Staff
Guided individual reading or study.

5990. DIRECTED RESEARCH. (Cr ar; prereq #)
Staff

Spanish and Portuguese

Staff—Chair, Constance Sullivan, 34 Folwell Hall

Professors: Hamilton, Jara, Ramos, Sousa, Spadaccini, Vidal, Zahareas

Associate Professors: Jones, Mantini, Sullivan

Assistant Professor: Klee

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

Major Requirements and Course Descriptions

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 areas in which Spanish or Portuguese is spoken. Study programs in Spain and Mexico offer special learning opportunities.

Information about advising services, student participation in decision making, the Undergraduate Student Association, and cultural opportunities can be obtained at the department undergraduate office, 5d 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.

B.A. Major Sequence—Spanish

Required Preparatory Courses—1101-1102-1103-1104-1105; or equiv

Major Requirements—Minimum of 49 cr, to include:

Four advanced language skills courses at the 3xxx level (minimum 13 cr)

3104 (4 cr)

One course each in Spanish or Spanish-American literature, Spanish or Spanish-American culture, and Hispanic linguistics (12 cr)

Five elective courses at the 3xxx or 5xxx level (20 cr)

Major project

Satisfactory score on Spanish proficiency examination

All major courses must be taken on A-F grading, and grades of C or better

must be earned in all courses. No more than 18 credits in 3xxx-level language courses, no more than 8 credits of topic and figures courses, and no more than 8 credits in topics courses in Hispanic linguistics may be used to fulfill major requirements. Also not acceptable for major credit: credits earned through tutorial programs; 3980; courses taught in English. At least three major courses must be taken on the Twin Cities campus.

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; or equiv

Port 1001-1002-1003-1004-1005; or equiv

Major Requirements—Two B.A.

“tracks” are available: one includes about two-thirds of the 3xxx-5xxx credits 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 cr, including one course in each of these groups: Port 3014, 5 cr from Span 3001—3005 series; Port 3501, 3502, Span 3501, 3502, 3512; Port 3211, 3212, 3213, Span 3910; Port 3721, Span 3021, 3730; Port 5110, 5210, Span 3940

30 cr in 3xxx-5xxx Portuguese or Spanish courses selected in consultation with the director of undergraduate studies

All major courses must be taken on A-F grading, and grades of C or better must be earned in all of the courses. At least three major courses must be taken on the Twin Cities campus. Not acceptable for major credit: SpPt 3980; more than 8 cr in Span 3730 or in 3910, 3940; credit received in community tutorial programs or in courses taught in English (36xx).

Minor Sequence—Spanish

Required Preparatory Courses—1101-1102-1103-1104-1105; or equiv

Major Requirements—Three advanced language skills courses at the 3xxx level (minimum 10 cr)

Three literature, culture, or linguistics courses at the 3xxx level (12 cr)

All minor courses must be taken on A-F grading, and grades of C or better must be earned in all courses. Only one directed studies or independent study course and only one topics course may be applied to the minor. Not acceptable for minor credit: SpPt 3980; credits earned through tutorial programs; and courses taught in English. At least two minor courses must be taken on the Twin Cities campus.

All courses for the minor program must be selected in consultation with the assigned departmental adviser.

Minor Sequence—Portuguese

Required Preparatory Courses—1001-1002-1003-1004-1005; or equiv

Minor Requirements—3014, 17 cr in 3xxx-5xxx Portuguese courses

All minor courses must be taken on A-F grading, and grades of C or better must be earned in all the courses. At least two minor courses must be taken on the Twin Cities campus. All courses must be selected in consultation with the assigned departmental adviser. Only one directed studies and one topics course may be applied to the minor. Not acceptable for minor credit: SpPt 3980; credit received in community tutorial programs or in courses taught in English (36xx).

Spanish (Span)

1101-1102-1103. BEGINNING SPANISH. (5 cr per qtr; degree credit granted only if entrance standard met)

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)

Speaking and comprehension; development of reading and writing skills based on materials from Spain and Spanish America. Grammar review; compositions and short presentations.

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.

3001. SPANISH PRONUNCIATION: STANDARD, COLLOQUIAL, DIALECTAL. (3 cr; prereq 1105 or #)

Contemporary standard Spanish pronunciation; listening and imitation exercises; progress recordings, private interviews. Local, regional, and social variants of the language in Spain and Spanish America.

3002. READING FOR SPEED AND COMPREHENSION. (3 cr; prereq 1105 or equiv)

Concentrated, individualized approach to sharpen reading skills, expand vocabulary, improve comprehension. Sight-reading drills, speed tests, word study, reading aloud. Variety of practical and literary materials at graded levels of difficulty.

3003. ADVANCED GRAMMAR WORKSHOP. (3 cr; prereq 1105 or equiv)

Difficult language structures, patterns, and usage. Directed study and practice to correct individual problem areas. Emphasis on accuracy in oral and written expression.

3004. WRITTEN COMMUNICATION: FORMAL AND INFORMAL. (4 cr; prereq 1105 or equiv)

Investigative reporting, expository writing, personal journals and letters, creative composition, research papers. Individual and class exercises based on model writings from periodicals, diaries, personal and business letters, literature of Hispanic world. Emphasis on clarity of expression and structure of composition.

Major Requirements and Course Descriptions

3005. ORAL COMMUNICATION: SPEAKING AND LISTENING. (4 cr; prereq 1105 or equiv)

Dialogues, group discussions, simulated situational conversations, interviews, skits, debates based on themes from audio and video tape, records, speakers from Spain and Spanish America. Emphasis on fluency in speaking and understanding of 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 years Spanish or #)

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.

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.

3601. SPANISH AMERICA: REVOLUTION AND THE NEW LITERARY CONSCIOUSNESS. (4 cr)

Avant-garde movements in the fiction of the Latin American continent; correspondence to revolutionary trends in Spanish-speaking countries. Famous novels. Taught in English.

3602. THE PICARESQUE WAY OF LIFE IN SPAIN AND EUROPE: LITERATURE AND THE DELINQUENT. (4 cr)

The picaresque novel: Spanish origins (16th century), zenith (17th century), and evolution to the present day. Literary and sociological examination of picaresque novels; modern directions. Taught in English.

3605. POLITICS IN SPANISH AND LATIN AMERICAN LITERATURE. (4 cr)

The civil wars in Spain; national liberation movements and political upheavals in Latin America. Taught in English.

3610. TOPICS: SPANISH PENINSULAR LITERATURE IN TRANSLATION. (4 cr per qtr [12 cr max])

Aspects of Hispanic literatures, focusing on groups of writers, universal themes, literary motifs, relationships between literature and other disciplines, or similar topics. Topics specified in *Class Schedule*. Taught in English.

3614. DON QUIXOTE: A STUDY OF LOST ILLUSIONS. (4 cr)

Study of the novel in many facets: the "madness" of its characters, the relation of their actions and attitudes to the theme of reality/illusion and to the society of their times. Taught in English.

3615. LITERATURE AND FILM. (4 cr)

Artistic techniques and social content in literature and cinema of Spanish- and Portuguese-speaking worlds. Taught in English and Spanish.

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. (4 cr; prereq 3003 or Port 3014) The phonology, morphology, and syntax of modern Spanish and Portuguese.

3709. INTRODUCTION TO THE DESCRIPTION AND ANALYSIS OF MODERN SPANISH. (4 cr; prereq 10 cr from 3001-3005 series or #) History of linguistic studies in Hispanic world, ranging from structure of Spanish language to dialectology and historical studies. Structural approach to description and analysis of the modern language. Relationship of linguistic and literary theory in Hispanic intellectual community. Bibliography.

3721. ORIGINS AND HISTORY OF SPANISH AND PORTUGUESE. (4 cr, §Port 3721; prereq 3003 or Port 3014) Principal stages in the growth and development of the languages and their role as expression of specific cultures. Concepts and methodology of Iberian historical linguistics.

3730. TOPICS IN HISPANIC LINGUISTICS. (4 cr per qtr [12 cr max]; prereq 3003) Problems: regional and social dialects of Spain and Spanish America; translation; structuralism; stylistics; linguistics and literary analysis; the taboo; political terminology. Topics specified in the *Class Schedule*.

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) Guided individual project for Spanish majors. Used to fulfill graduation requirements. Office of undergraduate studies has details.

5011. SPANISH STYLISTICS. (4 cr; prereq 10 cr from 3001-3005 series or #) Linguistic analysis of writing styles in standard and dialectal Spanish: descriptions, biographies, letters, articles for publication, dialogues, others.

5012. ADVANCED PROBLEMS IN THE SPANISH LANGUAGE. (4 cr; prereq 10 cr from 3001-3005 series or #) Problematic aspects of Spanish pronunciation, grammar, and idiomatic expressions for advanced speakers of Spanish as a second language. Polish acquired through supervised contact with beginning and intermediate students of the Spanish language. Also for students whose primary language is Spanish.

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.

5105. THE LITERATURE AND CULTURE OF MUSLIM SPAIN. (4 cr; prereq three 3xxx or 5xxx Spanish or Portuguese literature courses) Major literary works of Arabic culture in the Iberian peninsula—epic, lyric, philosophical prose—examined in terms of historical interactions among Arabic, Christian, and Jewish traditions.

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 Erasmus folly, madness as anachronism and social satire.

Major Requirements and Course Descriptions

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, gender vs. city, free will, others, viewed against literary, cultural, and social history.

5272. THE GENERATION OF 1898. (4 cr; prereq three 3xxx or 5xxx Spanish or Portuguese literature courses or Δ)

Major figures between 1895 and 1903—Ganivet, Unamuno, Baroja, Azorín, Valle-Inclán, Machado, J. R. Jiménez, Maeztu, others. Crisis of restoration Spain (Costa); intellectual, artistic renovations. The break with 19th-century realism and with philosophical rationalism among *modernistas* and *noventayochistas*.

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's *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-level Span or Port lit course 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.

5701, 5702, 5703. HISTORY OF IBERO-ROMANCE. (4 cr per qtr; prereq 10 cr from 3001-3005 series or #)

Contrastive study of origins and development of Ibero-Romance languages; emphasis on evolution of Spanish and Portuguese and development of Catalan.

5709. HISPANIC LINGUISTIC THOUGHT: 1100-PRESENT. (4 cr)

Linguistic theory as discussed by Hispanists from the Middle Ages to the present.

5711, 5712, 5713. THE STRUCTURE OF MODERN SPANISH: PHONOLOGY, MORPHOLOGY, SYNTAX. (4 cr per qtr; prereq 10 cr from 3001-3005 series or #)

Scientific approach to structure: syntax, phonology, word formation, dialectal differences. Useful for students who plan to teach Spanish and for those whose primary language is Spanish. *5711* (phonology): Theoretical and practical aspects of sound system of Spanish. Segmentals (vowels and consonants) and suprasegmentals (intonation, stress, and juncture). Dialectal differences. *5712* (morphology): Spanish affixes used to change meaning of words. Slight and radical changes in Spanish (modificative vs. transformative). New affixes and modern meanings; division between inflectional and derivational morphology. *5713* (syntax): Comparison and contrast of different types of grammars in terms of basic Spanish structure. Dialectal differences in Spanish syntax. Problems of English speakers with 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.

5721. INTRODUCTION TO ROMANCE PHILOLOGY. (4 cr; \$Port 5721; prereq 3721 or Port 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; *poesía 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*.

5930. TOPICS IN IBERO-ROMANCE LINGUISTICS. (4 cr per qtr [12 cr max]; prereq 10 cr from 3001-3005 series or Δ)
 Problems in Hispanic linguistics; aspects of Luso-Brazilian language. A variety of linguistic approaches and methods. 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*.

5970. DIRECTED STUDIES. (1-5 cr per qtr [15 cr max]; for MA and PhD candidates; prereq #, Δ)
 Guided individual reading or study.

5950. 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 U.S.; field experience in the Hispanic community of St. Paul.

5990. DIRECTED RESEARCH. (1-5 cr per qtr; prereq Δ)

5999. THE TEACHING OF COLLEGE-LEVEL SPANISH: THEORY AND PRACTICE. (4 cr)
 Training in both the theory and practice of foreign language teaching to new TAs in the Department of Spanish and Portuguese.

Portuguese (Port)

1001-1002-1003. BEGINNING PORTUGUESE. (5 cr per qtr; prereq 1001 or # for 1002 and 1002 or # for 1003)
 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. (5 cr; prereq 1003)
 Speaking and comprehension; development of reading and writing skills based on Portuguese-language materials.

1005. INTERMEDIATE PORTUGUESE. (5 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.

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 #)
 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.

3014. CONVERSATION AND COMPOSITION. (5 cr; prereq 1005 or equiv)
 Speaking and writing skills. Cultural comparisons, current events. Grammar review. Writing workshops.

Major Requirements and Course Descriptions

3501. LUSO-BRAZILIAN CIVILIZATION I. (5 cr; prereq 1005)

Luso-Brazilian culture from origins to 1808. Social and cultural currents that lay the basis for the modern Portuguese-speaking world.

3502. LUSO-BRAZILIAN CIVILIZATION II. (5 cr; prereq 1005)

Portuguese-language civilization from Napoleonic invasion to present. Social developments in Portugal and Brazil; their reflection in philosophy and the arts.

3603. MODERN AND CONTEMPORARY BRAZILIAN PROSE FICTION: ITS POLITICAL AND SOCIAL CONTENT. (4 cr)

Novel and short story of Brazil as reflection of contemporary Brazilian society and as an innovative art form. Modern Brazilian fiction. Taught in English.

3721. ORIGINS AND HISTORY OF SPANISH AND PORTUGUESE. (4 cr, §Span 3721; prereq 3014 or Span 3003)

Principal stages in the growth and development of the Spanish and Portuguese languages and their role as expressions of specific cultures. Fundamental concepts and methodology of Iberian historical linguistics.

3730. TOPICS IN PORTUGUESE LANGUAGES AND LINGUISTICS. (1-4 cr per qtr [12 cr max]; prereq 1005 and Δ)

Sample topics: introduction to Portuguese linguistics; Portuguese phonology, morphology, syntax, semantics; dialectology; stylistics; theory and practice of translation. Topics specified in *Class Schedule*.

3910. TOPICS IN LUSO-BRAZILIAN LITERATURE. (4 cr per qtr; prereq 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, socioaesthetic questions, literary techniques. Topics specified in *Class Schedule*.

5210. TOPICS IN BRAZILIAN LITERATURE. (4 cr per qtr [12 cr max]; prereq 3211 or 3212 or 3213 or equiv or three 3xxx or 5xxx Spanish literature courses, Δ)

For description, see 5110.

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. LITERARY EXPRESSION IN PORTUGUESE AMERICA. (4 cr; prereq three 3xxx Portuguese courses or Δ)

Analysis of key literary movements and figures from discovery to independence and imperial status, 1500-1807. Literature as a dimension of a sociocultural movement during which Brazil changed from supplier of raw materials to implicit hegemony as strongest economic entity in Lusophone world.

5524. LITERATURE DURING THE RISE OF THE BRAZILIAN BOURGEOISIE. (4 cr; prereq three 3xxx Portuguese courses or Δ)

Analysis of key literary movements and figures from independence through monarchical and republican eras to current state. Literature as a dimension of a sociocultural movement in an era of changing strategies for creation and stabilization of an independent economic and cultural entity.

5525. LUSOPHONE AFRICA: STATE AND ACCULTURATED LITERATURE. (4 cr; prereq three 3xxx Portuguese courses or Δ)

Analysis of key literary movements and figures from early documents through independence. Literature as a dimension of a sociocultural movement from colonial status through "autonomy" to forging of national entity. Combative literature and literature in a revolutionary society.

5721. INTRODUCTION TO ROMANCE PHILOLOGY. (4 cr, §Span 5721; prereq 3721 or Span 3721 or #)

Origins and development of Romance languages. Effects of language change on the Romance languages, individually and as a group. Medieval texts surveyed in terms of time, place, and cultural setting.

5910. TOPICS IN LUSO-BRAZILIAN LITERATURE. (4 cr; prereq Span 3104 or SpPt 3104 or Δ)

Important groups, movements, trends, methods, genres. Topics specified in *Class Schedule*.

5940. FIGURES IN LUSO-BRAZILIAN LITERATURE. (4 cr; prereq Span 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*.

5970. DIRECTED STUDIES. (1-5 cr per qtr [15 cr max]; for MA and PhD candidates; prereq #, Δ)

Guided individual reading or study.

5990. DIRECTED RESEARCH. (1-5 cr per qtr; prereq Δ)

Spanish-Portuguese (SpPt)

3104. THE ART OF READING LITERARY TEXTS. (4 cr, §Span 3104; prereq #)

For description, see Span 3104. Sections including reading in Portuguese offered at regular intervals.

3605. POLITICS IN SPANISH AND LATIN AMERICAN LITERATURE. (4 cr)

Civil wars in Spain; national liberation movements and political upheavals in Latin America. Taught in English.

3610. TOPICS IN SPANISH-PORTUGUESE CIVILIZATION AND CULTURE. (4 cr)

Selected topics in Spanish-language and Portuguese-language civilizations and cultures. May be applied to Route II requirement for either Spanish or Portuguese. Sample topic: Iberian epic poetry, oral and learned. Topics specified in *Class Schedule*. Taught in English.

3801. HONORS SEMINAR. (4 cr; prereq 20 cr toward major incl 3104, deptl 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]; S-N only; prereq #, Δ)

Undergraduates serve as teaching assistants in courses they have successfully completed for credit.

5021. MEDIEVAL SPANISH, PORTUGUESE, AND CATALAN TEXTUAL READINGS. (4 cr; prereq Span 3721 or Port 3721 and three 3xxx or 5xxx Spanish or Portuguese literature courses or Δ)

Distinctive linguistic, literary, and cultural features of medieval Iberian languages; reading Spanish, Catalan, and Galaico-Portuguese texts in the original.

5950. SELECTED TOPICS IN HISPANIC-LUSO-BRAZILIAN LITERARY INTERRELATIONSHIP. (4 cr per qtr; prereq reading knowledge of Spanish and Portuguese)

Common conceptions, background, and influences among peninsular Spanish, Spanish-American, Portuguese, and Brazilian literatures in essay, drama, poetry, and fiction.

5960. SELECTED COMPARATIVE PROBLEMS IN THE WORKS OF HISPANIC AND LUSO-BRAZILIAN AUTHORS. (4 cr per qtr; prereq reading knowledge of Spanish and Portuguese)

Common conceptions, background, and influences among major peninsular Spanish, Spanish-American, Portuguese, and Brazilian authors.

Speech-Communication (Spch)

Staff—Chair, Robert L. Scott, 317 Folwell Hall; *Director of Undergraduate Studies*, George L. Shapiro, 404a Folwell Hall; *Advising Office*, 404 Folwell Hall
Professor Emeritus: Howell

Professors: Bormann, Browne, Campbell, Goldstein, Jensen, Miller, Piche, Scott, Shapiro, Sykes

Associate Professors: Albert, Martin, Rarick

Assistant Professors: Mayerle, Poole

Speech-communication involves the study of the communicative dimensions of human experience, focusing particularly on interpersonal, rhetorical, and broadcast perspectives.

Cocurricular Activities—Any University student may participate in the forensic program offered by the department and in the operation of student radio station WMMR. Forensic activities include debate, the Freshman-Sophomore Oratorical Contest, and the Pillsbury Oratorical Contest. Majors are encouraged to participate in the social and educational activities of the Undergraduate Speech Association.

General Education—The department recommends as courses for nonmajors 1101, 1102, 3211, 3401, 3411, 3431, 3605, 5231, 5261, 5402, 5431, 5615, 5617.

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)

In order to qualify for major status, students must first take Spch 1102, 3211, 3401 and 3601, with an overall grade point average of 2.50. Students wishing to emphasize speech-communication in IDIM, BIS, UWW, and other individually designed programs must meet the same requirements.

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, §1441)

Oral communication processes and elements. Criticism of and response to oral discourse. Individual speaking.

1102f,w,s,su. FUNDAMENTALS OF SPEECH-COMMUNICATION: COMMUNICATION PROCESS. (4 cr)

Introduction to communication theory and research focusing on interpersonal, intercultural, group, and family settings.

1104. FUNDAMENTALS OF SPEECH-COMMUNICATION: THE CREATIVE PROCESS AND THE MASS MEDIA. (4 cr)

Mass media structure and its effects on the creative process.

1110f,w. FRESHMAN DISCUSSION AND DEBATE. (2 cr per qtr; open to fr who qualify for fr debate squad; prereq #)

1313. 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, §Air 3302) 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.

3202. PRODUCING VIDEOTAPE IN THE FIELD. (4 cr; prereq 3201)

The remote production process. Gathering video materials in field and integrating materials into studio products.

3203f,w,s. RADIO PRODUCTION. (4 cr; prereq 3201)

Equipment and staff organization; program design and presentation. Organization, writing, production, direction, and performance of radio news, music, dramatic, and documentary programs.

3204f,w,s,su. STUDIO TELEVISION PRODUCTION. (4 cr; prereq 3201)

The in-studio production process. Writing, producing, and directing in-studio video products.

3211. DETERMINANTS OF BROADCAST PROGRAMMING. (4 cr) Browne, 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 #)

Mayerle, 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) Sykes

Theories of interpersonal communication and their usefulness for particular purposes.

3402. COMMUNICATION IN RELATIONSHIPS. (4 cr; prereq 1102)

Communicative interactions between individuals in acquaintance, friendship, work, and significant ongoing relationships from onset to termination.

3411f,w,s,su (formerly 3641). 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.

3441. 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, §UC 3701; prereq planning an intercultural experience) Martin

Theories of and factors influencing intercultural communication. Development of effective intercultural communication skills.

3452. COMMUNICATION AND THE INTERCULTURAL REENTRY. (4 cr, §UC 3703; prereq return from an intercultural experience) Martin

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.

3601, 3601H. APPROACHES TO PUBLIC DISCOURSE. (4 cr; prereq 1101) Jensen, 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. PUBLIC SPEAKING. (4 cr; prereq 1101)
Public speeches: directed practice. Public speaking in contemporary life.

3615. ARGUMENTATION. (4 cr; prereq 1101 or #) Jensen
Role of reasoned discourse in social and governmental affairs. Logical methods of persuasion.

3620f,w. INTERCOLLEGIATE DEBATE AND ORATORY. (2 cr per qtr; prereq #)
For students interested in intercollegiate speech competition. Performance in speech activities.

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 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 cr for speech-communication majors]; S-N only; prereq #, Δ)
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.

5202s. ADVANCED TELEVISION PRODUCTION. (4 cr; prereq 3204)
Creative problems in production and direction. Each student produces and directs one major production.

5204. WRITING RADIO AND TELEVISION DRAMA. (4 cr; prereq 3201, #) Browne, Mayerle
Physical, psychological, and sociological aspects of radio and television and their influence on the writer. Writing scripts for dramatic commercials, dramas, and documentaries.

5211. CONTEMPORARY PROBLEMS IN AMERICAN BROADCASTING. (4 cr; prereq 3211, sr) Browne, Mayerle, Rarick
Problems affecting American commercial and educational broadcasting. Cable television, public access to broadcasting, violence on television, financing of public television.

5215. HISTORY OF TELEVISION PROGRAMMING. (4 cr; prereq 3211 or #) Mayerle
Evolution of television programming from pre-commercial beginnings to the present. Key genres, persons, issues, and trends in the development of prime-time television programming in the United States.

5220. STUDIES IN TELEVISION GENRE. (4 cr [8 cr max]; prereq 3211 or #) Mayerle
In-depth study of specific television genres such as drama, news and documentary, television comedy, the variety show, and the western; first appearance on television, artistic development, commercial success, growth as a program type, key persons involved.

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 utilization; 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, Soviet, others. Regulation, impact on political, social, and economic development.

5232. INTERNATIONAL BROADCASTING. (4 cr) Browne
International broadcasting in the United States, Great Britain, the Soviet Union, 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 #)
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)
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.

Major Requirements and Course Descriptions

5401. ADVANCED PROCESS OF INTERPERSONAL COMMUNICATION. (4 cr; prereq 3401 or grad)

Analysis of theories of communication and their usefulness for particular purposes. Historical and conceptual development of theories of communication.

5402f,w,s. 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 #)

Sykes
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 #)

Piche
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) Sykes

Nonverbal interpersonal communication. Nonverbal categories: gesture, facial expression, posture, clothing, environment.

5406. FAMILY COMMUNICATION. (4 cr; prereq 1102, 3401 for undergrads...5421 or equiv for grads)

Using a life cycle perspective, examines evolution of communicative patterns among members of a nuclear family at various stages of development.

5411. SMALL GROUP COMMUNICATION. (4 cr; A-N only; prereq 3411 or #) Bormann, Poole

Theories of communication within the small, task-oriented group. Group cohesiveness, leadership, role structure, information processing, decision making.

5412. GROUP AND ORGANIZATIONAL COMMUNICATION. (4 cr; S-N only; prereq 5411) Bormann

Intragroup and intergroup communication. Communication of small task-oriented groups in organizational context. Small group and organizational communication.

5414. AUTHORITY AND POWER IN TASK-ORIENTED COMMUNICATION. (4 cr; S-N only; prereq 3411 or #) 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 #)

Experimental and descriptive research; design and procedures; individual projects.

5422. INTERVIEWING AND COMMUNICATION. (4 cr; prereq 1101, 6 cr in social science 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, Psy 1001)

Modern motivational communication. Social control through persuasive speech.

5441. COMMUNICATION IN HUMAN ORGANIZATIONS. (4 cr; prereq 3401 or 8 cr in soc science)

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)

Methodological approaches to analyzing organizational communication. Application and theoretical foundations of survey (communication audits and communication flow), interpretive, and message analysis techniques.

5451. INTERCULTURAL SPEECH-COMMUNICATION. (4 cr; prereq 3401, Anth 1002 or another course in cultural anthropology or #) Albert

Successful interpersonal communication across cultures. Linguistic and nonverbal variables. Emphasis on North Americans abroad, communication with host nationals.

5452w,s. WORKSHOP IN INTERCULTURAL COMMUNICATION. (4 cr; S-N only; prereq 5451 or #) 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, 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) 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. 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.

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. Dennis Cook, 352a Classroom-Office Building; Chair, Department of Theoretical Statistics, Donald A. Berry, 270 Vincent Hall; Director of Undergraduate Studies, Robert J. Buehler, 257 Vincent Hall; Director of Graduate Studies, Christopher Bingham, 353b Classroom-Office Building
Professors: Berry, Bingham, Buehler, Cook, Das Gupta, Dickey, Eaton, Geisser, Hawkins, Hildreth, Lane, Larnitz, Lindgren, Sudderth, Weisberg
Associate Professors: Martin, Tierney, Weisberg
Assistant Professors: Brant, Chaloner, Oehlert

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 1231 or 1331 or 1621 (Stat 3091 or 1051 recommended)

Major Requirements—Math 3211 or 3611

Math 3142 or 3511
5021 and 5890

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 5022, 5201, 5301, 5302, 5401, 5421, 5601; IEOR 5030, 5040, 5550-5551, 5531; QA 5171; PubH 5452, 5454; CSci 3101, 5101-5102; Math 5681-5682-5683

Minor Sequence

Minor Requirements—Minimum of 17 cr from 3091 and 5xxx courses

Course selections must be approved by the director of undergraduate studies.

1051f,w,s. INTRODUCTION TO IDEAS OF STATISTICS. (4 cr; prereq high school higher algebra)

Presentation and analysis of data. Probabilistic models for inference. Inference and decision procedures. Emphasis on concepts rather than computation.

3091f,w,s. INTRODUCTION TO PROBABILITY AND STATISTICS. (4 cr, \$5121, \$5131; prereq differential and integral calculus; one section designated primarily for IT majors)

Elementary probability and probability distributions, sampling and elements of statistical inference. Treatment more mathematical than that in 1051.

5021f,w,s. STATISTICAL ANALYSIS I. (5 cr; prereq college algebra or #)

Frequency distributions; descriptive statistics; elementary probability; binomial, Poisson, and normal distribution; estimation and testing; analysis of variance; multiple comparisons; linear regression.

5022f,w,s. STATISTICAL ANALYSIS II. (5 cr; prereq 5021 or #)

(Continuation of 5021) Multiple regression and correlation; multiway analysis of variance, variance components, covariance; elementary principles of design; basic nonparametric methods.

5121f,w-5122w,s. THEORY OF STATISTICS. (4 cr per qtr, \$5131-5132-5133; prereq Math 1231 or 1331 or 1621)

Univariate and multivariate distributions, law of large numbers, sampling, likelihood methods, estimation and hypothesis testing, regression and analysis of variance and covariance, confidence intervals, distribution-free methods.

Major Requirements and Course Descriptions

5131f-5132w-5133s. THEORY OF STATISTICS.

(4 cr per qtr, §5121-5122; prereq Math 3411 or 3211)
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.

5134f-5135w-5136s. TOPICS IN THEORETICAL STATISTICS. (1 cr per qtr; prereq ¶5131, ¶5132, ¶5133)

5134: History of statistics. Original works in statistics, from the 17th century to the present. *5135*: Distributions in statistics. Practice in solving problems. *5136*: Theories of inference. Classical inference, Bayesian inference, decision theory, and other approaches.

5161f-5162w-5163s. APPLIED STATISTICAL METHODS. (4 cr per qtr, §5201, §5301, §5302, §5421; prereq ¶5022 or ¶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, 5272. BAYESIAN DECISION MAKING.

(4 cr per qtr, §Econ 5271, 5272; prereq ¶5122 or ¶5132 for 5271...5122 or 5132, Econ 1002 for 5272...5271 recommended for 5272; offered alt years)

5271: Axioms for personal probability and utility. Elements of statistical decision theory. Bayesian analysis of linear models. *5272*: Expected utility models for economic decisions made under conditions of uncertainty. Applications to portfolio selection, forward and future trading, betting, contingency markets, business planning.

5301f,s. DESIGNING EXPERIMENTS. (4 cr; prereq 5022 or 5122 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. (4 cr; prereq 5022 or 5122 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 5071 or 5022 or 5122 or #)

Bivariate and multivariate distributions. Inference 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; prereq 5022 or 5122 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 5022 or 5122 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, 5912. TOPICS IN STATISTICS. (3 cr per qtr [may be repeated for cr with Δ]; prereq 5122 or 5133, #)

Topics vary.

Studio Arts

See Arts, Studio.

Sumerian

See Ancient Near Eastern and Jewish Studies.

Swahili

See Afro-American Studies.

Swedish

See Scandinavian Studies.

Institute of Technology

CLA students may take up to 16 credits of course work offered by other colleges. The credits may be applied toward CLA degrees, but may not be used to fulfill group distribution requirements. Descriptions of

courses offered by the Institute of Technology can be found in the bulletin of that college. The basic physical sciences and mathematic departments, which are administratively housed in the Institute of Technology, are also part of the College of Liberal Arts; their courses are listed in this bulletin and may be applied to CLA degrees.

Theatre Arts (Th)

Staff—*Chair*, Barbara Reid, 208 Middlebrook Hall; *Director of Undergraduate Studies*, Jean Condon, 234 Middlebrook Hall; *Director of Graduate Studies*, Glen Gadberry, 217 Middlebrook Hall
Professors Emeritus: Ballet, Fredericks, Graham, Thompson, Whiting
Professors: Adey, Balk, Josal, Moulton, Nolte
Associate Professors: Berry, Brockman, Congdon, Crellin, Gadberry, Montgomery, Nash, Reid
Assistant Professor: Norwood
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.

Note: Students interested in dance courses and the Dance major, see Dance, page 88.

General Education—Courses that may be of interest to nonmajors are 1101, 1102, 1301, 1321, 1405, 1504, 1804, 3171, 3172, 3801, 5171, 5172, 5186.

B.A. Major Sequence

Required Preparatory Courses—1101, 1321, 1504

Major Requirements—3171, 3172, 3513, 3515, 3801, 3711 or 5711

12 cr in other 3xxx-5xxx courses chosen in consultation with adviser

Major project: 3101

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; 3101 during senior year. 1326 is a prerequisite to advanced acting courses.

Courses in art history, dramatic literature, humanities, music, psychology, and studio arts are recommended.

Minor Sequence

Required Preparatory Courses—1101, 1321, 1504

Minor Requirements—8 cr chosen from 3171, 3172, 3513, 3515, 3711, 3801

8 additional cr in 3xxx-5xxx courses

1101f,w,s. INTRODUCTION TO THE THEATRE. (4 cr) Nolte, Norwood

History and theory of plays and playwrights.

1102. DRAMA AND MEDIA. (4 cr) Neely, Nolte
 Study of dramatic form in contrasting media: theatre, film, and television. Lectures and film showings. Choice of outside viewing experiences.

1301. BEGINNING ACTING FOR NON-THEATRE MAJORS. (4 cr; prereq 1101) Moulton, 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,su. BEGINNING ACTING: CREATIVE APPROACH. (4 cr; prereq 1101, 1504, 3rd-4th fr or above) Berry, Norwood, staff
 Beginning Stanislavskian technique and improvisational exercises leading to elementary scene study.

1326f,w. BEGINNING ACTING: TECHNIQUE. (4 cr; prereq 1321)
 Fundamentals of body movement, rhythms, and acting technique. 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.

1804. ORAL TRADITIONS, MYTH TO MODERN. (4 cr) Congdon
 Oral performance of mythic, folk, and modern literature. Oral interpretation of epic, lyric, and dramatic voices in literature.

1805. ORAL INTERPRETATION OF PLURALISTIC LITERATURE. (4 cr) Congdon
 Reading and analyzing of selected poems, stories, and dramas by Afro-American, American Indian, Asian-American and Chicano writers, and the sharing of insights into a multi-racial and multi-ethnic society through solo and group performances.

Major Requirements and Course Descriptions

3101. SENIOR SEMINAR. (4 cr; prereq sr theatre major)

Lecture-discussions on ways in which all aspects of theatre production influence specific performance. Analysis of one professional and two University Theatre productions during the quarter. Final paper on one of the productions.

3115. INTRODUCTION TO PLAYWRITING.

(4 cr, \$5115; prereq 1101, 1321, 1504 or #) Nolte, staff
Techniques of playwriting; completion of original one-act play.

3171, 3172. HISTORY OF THEATRE. (4 cr per qtr; prereq 1101, 1504) Gadberry

History of world theatre. Performance practices and conventions. *3171*: Western theatre through Renaissance and Oriental theatre. *3172*: Western theatre from Renaissance to present.

3311. BEGINNING VOICE PRODUCTION FOR THE THEATRE. (4 cr; prereq 1321 or #1321) Nash

Exercises for actors to develop correct breathing, vocal placement, and clear diction. Performance and vocal analysis of prose, poetry, and drama.

3321. ADVANCED ACTING: CHARACTERIZATION. (4 cr; prereq 1326)

Presentation of scenes from plays with emphasis on characterization.

3322. ADVANCED ACTING: PERIOD PLAYS AND STYLES. (4 cr; prereq 3311, 3321, 3326)

Research and performance of scenes from period plays using skills developed in 3321.

3326. THEATRE DANCE. (2 cr; prereq 1326) Moulton

Dance techniques. Practice and performance of dances in the theatre.

3328. MIME AND THE MASK I. (4 cr; prereq 1326) Berry

Training for actors in the traditions of Jacques LeCoq, introduction to work in mask.

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 addtl 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. (4 cr; prereq 1504) Josal, Brockman

Theory and practice of design and execution of stage scenery and properties. Laboratory.

3515w,alt su. TECHNICAL THEATRE PRODUCTION II. (4 cr; prereq 1504) Montgomery, Crellin

Theory and practice in design and execution of stage lighting and costuming. Laboratory.

3711f,w,s. STAGE DIRECTION. (4 cr, \$3708,

\$5711; prereq 1321, jr or sr)
Theory of direction: concept and analysis. Blocking and production of short scenes.

3801f,w,s,su. ORAL INTERPRETATION OF FICTION. (4 cr; prereq 1504 or 1804 or Spch 1101) Congdon

Selected short stories. Solo and group readings.

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)

5100. THEATRE PRACTICUM. (1-6 cr per qtr; prereq #, Δ)

Individual creative projects in production of approved plays. Playwriting, directing, acting, design.

5110f,w,s,su. THEATRE PERFORMANCE. (1 cr per qtr [9 cr max]; S-N only; prereq written permission after casting and/or assignment to a production) Montgomery

Participation in rehearsals and performances of a major University Theatre production. Credit awarded the quarter performance takes place.

5115-5116. PLAYWRITING. (4 cr per qtr, \$3115 for 5115; prereq 1321 or # for 5115...3115 or 5115 for 5116) Nolte

Students with established competence in the well-made play move to more experimental forms. *5115*: One-act play. *5116*: Full-length play.

5171, 5172. HISTORY OF THEATRE. (4 cr per qtr; prereq sr or grad student) Nolte

Theatre as a mirror of society. The aesthetic, philosophy, and technique of theatre arts. *5171*: Classic Greece to romantic movement. Ancient, medieval, Renaissance, Restoration and 18th-century theatre. *5172*: Modern theatre in western civilization. From Ibsen to present.

5177, 5178. THEATRE BACKGROUNDS. (4 cr per qtr; prereq 1504, jr or sr or grad student)

Selective examination of plays of the living theatre. Chronological, comparative study of development of theatrical elements in the drama from its origins to present. *5177*: Through 18th century. *5178*: 19th, 20th centuries.

5186. AMERICAN THEATRE. (4 cr; prereq sr or grad theatre major or #)

The theatre as an aspect of American culture, 1752 to present.

5311. INTERMEDIATE VOICE PRODUCTION FOR THE THEATRE. (4 cr; prereq #, written permission) Nash

History and theories of theatre speech; exercises to develop techniques of abdominal breathing, tonal placement, and clear articulation; performance and analysis of voice techniques applied to dramatic literature.

5313. INTERMEDIATE VOICE PRODUCTION FOR THE THEATRE. (4 cr; prereq 5311, #, written permission) Nash

History and theories of singing; performance and analysis of voice techniques applied to songs for music theatre.

5314-5315. STAGE COMBAT. (2 cr per qtr; prereq 1326 or grad student, #) Berry
History, techniques, and aesthetics of staging physical combat. 5314: Unarmed combat. 5315: Armed combat.

5321. PROBLEMS IN PROFESSIONAL ACTING. (4 cr; prereq 3321 or grad student)
Exploration by students and a professional actor of acting techniques necessary for professional careers.

5323. ACTING FOR THE CAMERA. (4 cr; prereq 3321 or grad student, written permission) Moore
Laboratory course. Differences between stage acting and acting for camera. Scenes enacted and played back on videotape for class criticism. Students operate cameras. Attendance mandatory.

5328. MIME AND MASK II. (4 cr; prereq 3328 or grad) Berry
More advanced mime training for actors; expressive masks.

5334f-5335w-5336s. ACTING FOR MUSIC & THEATRE. (4 cr per qtr; prereq 1326, 3313 or 8313 or music major, written permission) Balk
Philosophy and techniques of music and theatre applied to spoken and sung dramatic literature.

5502. ADVANCED MAKEUP FOR THE STAGE. (2 cr; prereq 1502 or equivalent or grad) Crellin
Advanced makeup design including facial casting, prosthetics, and hair ventilating.

5510. DRAWING AND RENDERING FOR THEATRE DESIGNERS. (2 cr per qtr; prereq 3513 or 3515 or grad student, #)
Drawing and rendering skills for presentation of scenic and costume designs. Drawings in fall, renderings in spring.

5511. SCENOGRAPHIC TECHNIQUES. (4 cr; prereq 5513, #) Brockman
Drafting skills for the theatre designer; interpretation of renderings for the stage.

5512. ADVANCED PROBLEMS IN COSTUMING. (4 cr; prereq 3515 or #; lab ar) Crellin
Theory and design of costumes. Projects. Laboratory.

5513. STAGECRAFT. (4 cr; prereq 3513, #) Brockman
In-depth study and practical application of scenic materials, tools, and construction materials used in the theatre today. Laboratory.

5514. ADVANCED PROBLEMS IN SCENE DESIGN. (4 cr; prereq 3513 or #) Josal
Theory and design of stage scenery. Reports and projects. Laboratory.

5516. ADVANCED PROBLEMS IN STAGE LIGHTING DESIGN. (4 cr; prereq 3515, 3711 or #) Montgomery
Theory of stage lighting design. Drafting and development of the lighting plot. Laboratory.

5518. ADVANCED PROBLEMS IN STAGE PROPERTIES. (4 cr; prereq 3513 or #) Josal
Theory and design of stage properties. Projects and reports. Laboratory.

5519. SOUND FOR THE THEATRE. (2 cr; prereq 1504, #) Montgomery
Theory and technique of producing and amplifying sound. Laboratory.

5520. COSTUMING CRAFTS AND TECHNIQUES. (4 cr per qtr [8 cr max]; prereq 3515, 5512 or #) Crellin
Theory and practice in costuming in professional and repertory theatres. Laboratory.

5522. HISTORY OF COSTUME FOR THE STAGE. (4 cr; prereq 3515) Crellin
The history of clothing and theatrical costume, research methods in costume history, problems of and solutions for transforming historical research into stage costume.

5540. SCENE PAINTING TECHNIQUES. (2-4 cr per qtr [12 cr max]; prereq 3513 or #) Brockman
Materials, layout, and painting techniques used in the theatre. Painting styles and texturing techniques.

5566. STAGE LIGHTING CRAFTS AND TECHNIQUES. (4 cr [8 cr max]; prereq 3515 or #) Montgomery
The lighting technician's skills and crafts; wiring, splicing, dimmer functions, equipment from a practical standpoint. Laboratory.

5580. PROPERTIES CRAFTS AND TECHNIQUES. (4 cr per qtr; prereq 3513, 5518 or #) Brockman
Theory and practice in creating stage properties for professional and repertory theatre. Laboratory.

5711. STAGE DIRECTION. (4 cr, §3708, §3711; prereq 1321, sr or grad student)
For description, see 3711.

5712. STAGE DIRECTION. (4 cr; prereq 3708 or 3711 or 5711 and 3513, 3515, 3801) Adey
Examinations of dramatic forms. Theory of rehearsal and production problems and direction of two one-act plays.

5716. STAGE MANAGEMENT FOR THE THEATRE. (4 cr; prereq 3711 or §3711 or 5711 or §5711) 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, sr or grad student or #) Neely
Theory and practice in ticket office procedures, house management, publicity and promotion; problems in college, community, children's, and professional theatres.

5720f,w,s. PLAYS IN PRODUCTION AND PERFORMANCE. (2-4 cr per qtr [6 cr max for undergrads]; prereq 5712, written permission) Adey
Work on campus or with a community, high school, touring, or professional theatre group for experience in stage direction.

Major Requirements and Course Descriptions

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, #; prereq 5334-5335-5336) Balk

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.

5804. ORAL INTERPRETATION OF POETRY AND DRAMA. (4 cr; prereq 3801 or grad)

Analysis and performance of poems and poetic drama.

5811. HISTORY OF ACTING AND INTERPRETATION. (4 cr; prereq 3321 or 3322, 3801 or grad student; offered alt yrs)

Major traditions of theatre and literary performance from ancient times to present.

5813. THEORIES OF ACTING AND INTERPRETATION. (4 cr; prereq 3321 or 3322, 3801 or grad student; offered alt yrs) Berry

Aesthetic, literary, and psychological theories as they relate to acting and interpretation.

5823f, w, s. ORAL INTERPRETATION OF SHAKESPEARE. (4 cr; prereq 1504, 3801 or grad student)

Trends in oral performance of Shakespeare's plays on the stage and by readers. Recording and criticism of Shakespearean theatre. Performance of selected scenes.

5910-5950. 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 in theatre, #, Δ)

Guided individual reading or study.

Theological Study Preparation

Staff—Chair, Arthur Johnson, 1127 Social Sciences Building

Adjunct Faculty—Professors: Altholz (History), Coifman (Afro-American and African Studies), Hopkins (Philosophy), Johnson (Sociology)

Associate Professors: Paradise (Ancient Near Eastern and Jewish Studies), Shaw (Political Science)

The pretheology major is one of a number of approaches to preparation for study

at a seminary; majors such as history, sociology, classics, Hebrew, or philosophy are also acceptable to most seminaries. If you are interested in religious studies but not in entering a seminary, you should not select this program (see Religious Studies listing). You are urged to consult the adviser in 183 Klaeber Court if you are preparing for seminary training, whether you elect this program or not. Approval of one of the staff members listed above is needed to enter the major program.

If you are preparing to enter a particular seminary or graduate theology department, you should obtain a statement of specific requirements or recommendations from the seminary or department.

The current catalogs of most seminaries in the United States and Canada are on file in 183 Klaeber Court. The program adviser can help arrange visits to or interviews with staff members of nearby seminaries.

B.A. Major Sequence

Required Preparatory Courses—Phil 1001 or 1002; Psy 1001; Greek and/or Hebrew strongly recommended (depending on seminary selected)

Major Requirements—Phil 3002, 3003, 3004

3xxx and 5xxx courses (no more than 25% on S-N grading) selected as follows: two from studio arts, art history, music, or theatre arts; two in ancient history; one in medieval-Renaissance history, two in modern history; two English courses; two humanities, classics, foreign literature in translation, modern foreign language, Greek, Hebrew, or Latin courses; three anthropology, economics, geography, political science, sociology, speech-communication, or psychology courses

All courses for the major, whether required or not, must be completed with C or higher grades.

Turkish

See South and Southwest Asian Studies.

Urban Studies (UrbS)

Staff—*Coordinator*, Judith Martin, 348 Social Sciences Building

Adjunct Faculty—*Professors*: Adams (Geography and Public Affairs), Berman (History), Clemence (Architecture), Coen (Economics), Maki (Agricultural Economics), Scott (Political Science), Shapiro (Speech-Communication), Sheppard (Geography), Zaidi (Industrial Relations)
Associate Professors: Galaskiewicz (Sociology), Miller (Geography), Wattenberg (Social Work)
Assistant Professors: Miller (Geography), Prell (Anthropology)

This cross-disciplinary major involves urban studies course work, fieldwork experiences, and introductory work in a number of disciplines that offer useful perspectives on contemporary urban and postindustrial society. Three 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.

B.A. and B.S. Degree Programs

You may choose one of three urban studies degree options, depending on your career plans. The general B.A. offers the opportunity to survey a variety of urban-related disciplines or to focus on a specific topic (e.g., housing, transportation, criminal justice) from the viewpoint of several disciplines. The B.A. preparatory to graduate school in one of the disciplines related to urban studies offers a degree of specialization in a particular area that complements the breadth of the urban studies major. The B.S. option emphasizes quantitative analysis skills and fieldwork or internship experience as preparation

for work in urban planning or related areas. Depending on the degree track chosen, the required number of major program credits ranges from 51 to 65.

Although you will develop an individual major program, there are certain required components: an introductory course, one urban studies colloquium, two workshops or approved advanced seminars, quantitative skills courses, and approved urban studies electives. The B.S. and the general B.A. options require fieldwork or internship experience. The B.S. and B.A. preparatory to graduate study options require a core of courses in one of 11 disciplinary concentrations. The *Urban Studies Program Booklet*, available from the department, contains a listing of required and recommended courses for each of these degree options and the 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, and electives

3101f, 3102w, 3103s. URBAN STUDIES COLLOQUIA. (2 cr per qtr; S-N only; prereq Δ) Staff
 Introduction to urban problems and problem-solving techniques. Typically two or more colloquia are offered each quarter.

3104. INTRODUCTION TO URBAN STUDIES.

(3 cr; A-N only; prereq #) Martin
 Introduction to the field for urban studies sophomores and those considering an urban studies major. Lectures by adjunct faculty members; lectures and discussions with program coordinator to integrate the diverse aspects of urban studies.

3500f,w,s. WORKSHOPS.

(4 cr per qtr; prereq jr or sr, #) Staff
 Project focused workshops, usually with substantial field experience components. Typically two or more workshops offered each quarter.

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.

Major Requirements and Course Descriptions

Urdu

See South and Southwest Asian Studies.

Western European Area Studies

Staff—*Director*, Michael Metcalf, 314 Social Sciences Building (625-1557)

The Western European Area Studies minor is offered by the Western European Area Studies Center, 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.

Minor Sequence

Minor Requirements—completion of the CLA Route I language requirement in a Western European language; a total of 24 credits 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 level courses chosen around a topic selected in consultation with the center director

All courses must be taken A-F and only 4 credits 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.

Women's Studies (WoSt)

Staff—*Chair*, Naomi Scheman

Professors: Faunce (Women's Studies, Psychology), Garner (English), Joeres (German), Knudson (Institute of International Studies), McNaron (Women's Studies, English)

Associate Professors: Evans (History), Junghare (South and Southwest Asian Studies), Kaminsky (Women's Studies), Loeffler (University Counseling Services), May (American Studies), Maynes (History), McClary (School of Music), Quam (Social Work), Scheman (Philosophy, Women's Studies), Spector (Anthropology), Sprengnether (English), Sullivan (Spanish and Portuguese), Yates (American Studies)

Assistant Professors: Albrecht (General College), Brooks (Studio Arts), Dietz (Political Science), Geiger (Women's Studies), Jones (Social Work), Lindoo (Continuing Education for Women), Prell (Anthropology), Zita (Women's Studies)

Instructors: Fraser (Humphrey Institute), Truax (Director, Minnesota Women's Center)

Adjunct Faculty: Kriel, Marquit, Register, Rose, Wiger

The women's studies program attempts to meet the University community's need to study women and to develop feminist perspectives through nonsexist education and multidisciplinary approaches to knowledge about women.

Courses continue to be added to the program. The *Class Schedule* or the Women's Studies office can provide current information about new courses.

B.A. Major Sequences

Required Preparatory Courses—1001, 1002

Major Requirements—*Sequence A*—48 cr in adviser-approved courses, 24 of them in WoSt courses (including 8 cr in 3900)

Sequence B—48 cr in adviser-approved courses (including 8 cr in 3900)

Majors are required to take at least one course that focuses on American minority women.

Majors may take a maximum of 12 credits in topics courses (3100, 5100/3200, 5200/3300, 5300/3400, 5400/3500, 5500/3600, and 5600).

Prospective majors should consult the *Women's Studies Handbook*. The handbook and a list of courses in other depart-

ments that may be included in major programs may be obtained from the Women's Studies office.

Minor Sequence

Required Preparatory Courses—1001 or 1002

Minor Requirements—Minimum of 20 3xxx-5xxx cr

A maximum of 8 credits in courses offered by other departments may be taken.

Course selections must be approved by the women's studies adviser.

Introductions to Women's Studies

1001, 1002 (formerly 1005, 1006). INTRODUCTION TO WOMEN'S STUDIES. (4 cr per qtr)
Women's Studies as a discipline; brief history of feminism; overview of issues related to the current and rapidly changing role and status of women.

1101 (formerly 1977). THE PSYCHOLOGICAL ENVIRONMENT OF WOMEN. (4 cr)
Behavioral and social science principles and theories that have unique applications to the development, growth, and behavior of women.

1102 (formerly 1155). 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 (formerly 3910). TOPIC IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])
Topics specified in *Class Schedule*.

3102 (formerly 3901). FEMINIST THEORIES. (4 cr)
Representative feminist theories and their relations to political action. Primarily for non-majors.

3103 (formerly 3349). 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.

5100 (formerly 5910). TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])
Topics specified in *Class Schedule*.

5101. HISTORY OF FEMINISM. (4 cr; prereq 1001, 1002)
Feminist thought and movements; feminist acts since 1790, especially in the United States and Great Britain; other international references.

5102. CURRENT FEMINIST SCHOLARSHIP. (4 cr; prereq 1001, 1002 or grad or #)
Current scholarship dealing with the feminist intellectual revolution.

5107 (formerly 5404). FEMINIST CRITICISM OF CONCEPTS OF THE SELF. (4 cr; prereq 12 cr in women's studies or substantial work in philosophy, religious studies, social sciences, 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.

5108 (formerly 5303). ANTHROPOLOGY OF CONTEMPORARY FEMINIST ISSUES. (4 cr; prereq 1001, 1002, Anth 1102...Anth 3303 recommended)
Cross-cultural and evolutionary approaches to the study of contemporary feminist issues.

Women's Biology, Psychology, and Sexuality

3200 (formerly 3910). TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])
Topics specified in *Class Schedule*.

3202 (formerly 3001). BIOLOGY OF WOMEN. (4 cr; prereq Biol 1011 or Phsl 1001 or #)
Physiology, anatomy, and endocrine chemistry relevant to women's lifecycles and reproductive functioning.

3203 (formerly 3002). 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 (formerly 3005). SEXUALITY AND SELF-IMAGE. (4 cr; prereq 1001, 1002 or #)
Social attitudes toward sexuality and how they influence our sense of ourselves. Focus on art, pornography, rape, the economy, psychosexual development and the family.

3205 (formerly 3301). WOMEN: A SENSE OF IDENTITY. (4 cr; \$5205)
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.

5200 (formerly 5910). TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])
Topics specified in *Class Schedule*.

5201 (formerly 5104). THE OLDER WOMAN: A FEMINIST PERSPECTIVE. (4 cr; prereq Soc 3937, 12 cr in 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.

Major Requirements and Course Descriptions

5202 (formerly 5377). FEMINIST THERAPIES. (4 cr)

Sexism in theoretical views of women and therapy; alternative emerging views of alternative therapeutic approaches for women. Resources include feminist behavioral/social science research and literature; biographies, essays, and cases regarding women's lives; and community resource persons.

5205 (formerly 5301). WOMEN: A SENSE OF IDENTITY. (4 cr, \$3205)

For description, see 3205.

Women in Literature and the Arts

3300 (formerly 3910). TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])

Topics specified in *Class Schedule*.

3306 (formerly 3501). WOMEN AND LITERATURE. (4 cr; prereq introductory work in literature)

Women writers and critics of literature about women. Usually limited to Western literature.

3307 (formerly 3101). 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.

3304 (formerly 3502). WOMEN AND THE ARTS. (4 cr; prereq introductory work in music, art, drama, dance, film or other arts)

Works of art by or about women. Focus may be on one or more of several forms of artistic expression.

3305 (formerly 3705). 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 (formerly 3302). U. S. MINORITY WOMEN WRITERS. (4 cr; prereq 8 cr in women's studies or 4 cr in women's studies and 4 cr in literature, American studies, Chicano studies, black studies or native American studies.)

Analysis of poetry, fiction, and drama written by minority women in the United States.

5300 (formerly 5910). TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])

Topics specified in *Class Schedule*.

5304 (formerly 5106). WORKING CLASS WOMEN'S LIVES. (4 cr; prereq 12 cr in women's studies or English or #)

Written work reflecting class background. Novels, poems, essays, short stories by women of various racial and ethnic identities.

Comparative Study of Women

3400 (formerly 3910). TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])

Topics specified in *Class Schedule*.

3402 (formerly 3333). WOMEN IN LIBERATION STRUGGLES. (4 cr)

Women's participation in processes of revolution and social transformation in China, Cuba, and Africa. Historical, ideological, and economic factors in the changing lives, roles, and consciousness of women involved in 20th-century revolutions.

3403 (formerly 3304). JEWISH WOMEN IN THE UNITED STATES. (4 cr)

Analysis of the cultural, social, and 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, and documentation of their perspectives on that process.

5400 (formerly 5910). TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])

Topics specified in *Class Schedule*.

5401 (formerly 5911). 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 (formerly 5123). WOMEN IN CONTEMPORARY AMERICAN RELIGION. (4 cr; prereq 1001, 1002 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 (formerly 3910). TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])

Topics specified in *Class Schedule*.

5500 (formerly 5910). TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])

Topics specified in *Class Schedule*.

5501 (formerly 5311). 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 (formerly 5321). WOMEN AND PUBLIC POLICY. (4 cr; prereq 1001, 1002 or #)

A survey of public policy issues of special concern to women in the U.S.

Women and Work

3600 (formerly 3910). TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])

Topics specified in the *Class Schedule*.

3602 (formerly 3200). 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 the *Class Schedule*.

5600 (formerly 5910). TOPICS IN WOMEN'S STUDIES. (4 cr per qtr [12 cr max])

Topics specified in the *Class Schedule*.

5601 (formerly 5103). GENDER AND CLASS.

(4 cr; prereq 12 cr in women's studies including 1001 or 1002 for undergrads...# for grads)

Interactions between gender roles and social class in a historical and comparative perspective; course topics will include introduction to concepts and methods of gender and class analysis, women's work and economics systems, domestic work, social reproduction, feminism and socialism.

Senior Seminars

3900. SEMINAR. (4 cr per qtr; prereq jr, sr, and Δ)

Applies knowledge and methodology gained from courses and experience to topics of an interdisciplinary nature that focus on women.

Directed Study, Research and Internship Courses

3960. FIELD LEARNING IN WOMEN'S STUDIES. (4 cr per qtr [8 cr max]; prereq 1001, 1002, 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)

Independent study to pursue individual interests.

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)

Guided individual reading or study.

Zoology

Courses in zoology may be found in the listings of the Department of Ecology and Behavioral Biology 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 grade averages (usually C for undergraduate programs, B or higher for graduate). 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.

School of Architecture and Landscape Architecture

The School of Architecture and Landscape Architecture offers two preprofessional degrees in architecture (the B.A. with a major in architecture through CLA, and the bachelor of environmental design, or B.E.D., through the Institute of Technology), and two professional degrees in architecture (the bachelor of architecture, or B.Arch., through IT, and the master of architecture, or M.Arch., through the Graduate School). Information about the B.E.D. and B.Arch. programs is available in the *Institute of Technology Bulletin* and from the School 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 the school.

The professional degree bachelor of landscape architecture (B.L.A.) is offered jointly by the school through the Institute of Technology and by the Department of

Horticultural Science and Landscape Architecture through the College of Agriculture. The master of landscape architecture (M.L.A.) is offered through the Graduate School. Information about the B.L.A. program is available in the *Institute of Technology Bulletin* and the *College of Agriculture Bulletin* as well as from the School of Architecture and Landscape Architecture and the Department of Horticultural Science and Landscape Architecture, 205 North Hall, University of Minnesota, 2005 Buford Avenue, St. Paul, MN 55108.

To be considered for admission to the entry-level architectural design sequence (Arch 3081-3082-3083), you must have completed or be in the process of completing all required preparatory courses, a minimum of 45 credits, prior to application. You must apply by April 1 for admission the following September. (Use Form AR 110.) Admission decisions are based on academic record, college work completed, and submission of the required design problem set available at the school; you also may submit evidence of graphic communication and artistic ability. To enroll in the design sequence, you must have completed all required courses.

If you wish to pursue the professional degree master of architecture, you should apply for admission to the school after you have completed the distribution and language requirements required for the B.A. degree. Students enrolled in the College of Liberal Arts who intend to pursue the professional degree bachelor of architecture will be designated architecture majors only upon admission to the School of Architecture, at which time they will also be admitted into the Institute of Technology.

College of Biological Sciences

The College of Biological Sciences (CBS) is an upper division unit of the University, and you normally enter the college at the beginning of your junior year. CBS offers the B.S. degree with majors in biochemistry, biology, botany, genetics and cell biology, and microbiology. If you have

a special interest in a related area of study (e.g., ecology, behavioral biology, zoology), you may major in biology and include in your program a suitable selection of advanced courses in your area of interest. An individually-designed program is also available. Irrespective of major, you must complete a common core sequence of courses in biology, the physical sciences, and mathematics.

As soon as you decide to major in a bio-science area, you should contact the college's Student Services undergraduate counseling office, 223 Snyder Hall, University of Minnesota, 1475 Gortner Avenue, St. Paul, MN 55108, for advice and counseling. Appointments may be made by calling 624-9717.

Specific requirements for admission include a minimum of 84 quarter credits with grades of A, B, C, or S, including 10 credits of analytical geometry and calculus (Math 1211-1221), 10 credits of general chemistry (Chem 1004-1005 or 1031-1032), and a course in general biology (Biol 1009).

You are strongly encouraged, especially if you are transferring from another institution, to complete the third quarter of the calculus sequence (Math 1231) required for graduation prior to your first quarter of enrollment in CBS.

(Bachelor of arts degrees in biology and microbiology 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. A B.S. degree is granted to students who have satisfactorily completed three years of pre-dental liberal arts studies and two years of dental studies and who have not used their pre-dental requirements for a degree elsewhere.

Admission—A minimum of 130 credits from an accredited college is required. The scholastic average necessary for consideration is C. Admission is on a competitive

basis, however; an average well above C is usually necessary to be selected.

Required Courses and Credits—(science courses must include laboratory instruction):

English—12 cr in basic English, in such areas as composition, literature, etymology, speech, or humanities (with emphasis on literature).

Mathematics—Background in college algebra or pre-calculus as demonstrated by college validation or credit or a course in computer science or statistics.

General Chemistry—12 cr: Chem 1004-1005-1006 or 1004-1005 and 3100-3101.

Organic Chemistry—10 cr: Chem 3301-3302 and 3305-3306.

Biology—10 cr: two quarters of biology or one quarter each of biology and zoology—Biol 1009, 1106, or 3011.

Physics—10 cr. Calculus-based physics should be taken by students who plan advanced work in dentistry: Phys 1041-1042, 1045-1046, 1104-1105-1106, 1107-1108-1109.

Psychology—5 cr: Psy 1001.

It is strongly recommended that required courses be completed by the end of the academic year prior to 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 (180 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.

Admission Tests—The required Dental Admission Test (DAT) is given two times a year, usually in October and April. It is wise to take the test soon after required science courses are completed. It is recommended that the test be taken by October of the preceding academic year for enrollment the following fall. The test measures aptitudes and special knowledge. A review of biology, general chemistry, and or-

ganic chemistry is urged. Application forms for the DAT may be obtained from the Office of Admissions (240 Williamson Hall), the School of Dentistry, or 30 Johnston Hall.

Residence Requirements—First priority is given to Minnesota residents, second to residents of neighboring states with which the University of Minnesota has contract or reciprocity agreements, and third to other nonresidents who have acceptable reasons for attending the University School of Dentistry.

Further information about application procedures, admission, qualifications, and related matters may be obtained from the CLA Health Sciences advising office, 30 Johnston Hall; the School of Dentistry office, 15-106 Malcolm Moos Health Sciences Tower; or the *School of Dentistry Bulletin*.

College of Education

If you plan to seek state of Minnesota teacher licensure upon graduation from the University of Minnesota, you must complete a B.S. program in the College of Education. You usually begin as a CLA freshman and transfer to the College of Education after one or two years of general education, depending on the program you wish to enter.

Admission—Admission to the College of Education after one or two years of pre-education studies requires at least a 2.00 average in college course work and at least a 2.50 in courses in the major field. Students who have met the freshman and sophomore requirements as specified in the *College of Education Bulletin* will be given preference.

Due to limited enrollment in the College of Education, you must apply early in the regular quarter preceding that in which admission is desired. Certain programs do not admit every quarter. Check with the Education Student Affairs Office in the College of Education or the CLA Pre-major Advising Office.

Requirements in Drug Education and Physical Education—Minnesota law re-

quires that candidates for licensure complete, before graduation, a course in drug education (PubH 3004) and three credits in appropriate physical education courses (you may complete this work before applying for transfer to the college).

One-Year Pre-Education Programs in CLA—If you are planning to enter a College of Education program in art education, business education, industrial education, marketing education, physical education, or recreation, park, and leisure studies, you usually spend one year in CLA. To transfer, you must complete 45 credits with 2.00 overall and 2.50 major-course grade point averages. If you are seeking an art, industrial, music, or physical education major, you must meet special requirements; information about these requirements is available in the *College of Education Bulletin*.

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 grade point average of 2.50 is required for consideration, but few students with a grade point average below 2.75 are admitted. 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—Most other College of Education programs require two years of CLA work—about 90 credits. You must meet the English composition and distribution requirements as listed in the *College of Education Bulletin*, and must present 15 credits in your proposed major field (social studies requires 25 credits) with a 2.50 average and sometimes 10 credits with a 2.00 average in a minor field (all graded on the A-F basis).

Information about education programs is available at the Education Student Af-

fairs Office, University of Minnesota, 1425 University Avenue S.E., Minneapolis, MN 55414 (625-1550).

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 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 M.A. program focuses on the scholarly study of mass communication and emphasizes research and analysis of the mass media and media systems. Students completing the general program are particularly suited for careers in communication policy or in research or teaching at the community college level; they may also wish to pursue further graduate study. The professional M.A. program provides preparation for careers in the print and broadcast media, advertising, visual communication, and certain specialty areas such as science journalism and media management. These degree programs combine general study in mass communication with professional skills courses.

The doctoral program offers training for academic careers in communication education, research, or communication policy. The program offers four fields of specialization: communication theory and research methodology; the history of mass communication; mass communication agencies as social institutions, which includes communication law and regulation; and international mass communication.

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 (625-4054).

Law School

Requirements for Admission and for Degrees 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 B.A. 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 April 15 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 will also 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; the University Counseling Services, 101 Eddy Hall; or the Law School Admission Council, Box 2000, Newtown, Pennsylvania 18940.

School of Management

The School of Management offers two programs for the bachelor of science degree: regular and accounting. If you are interested in admission to the college, you should obtain a pre-management information sheet from a college counseling office or from 290 Hubert H. Humphrey Center.

CLA Preparation for Degree Work in Other Colleges

The pre-management program combines liberal education course work with introductory course work in accounting, statistics, and economics. Because of the widening social responsibilities of business management, you are required to take courses outside of management.

To be considered for admission to the school, you must present a minimum of 80 credits from a recognized college or university. Generally, a 2.80 GPA is required to be considered for admission. You must complete the mathematics, economics, accounting, and statistics requirements before applying to the School of Management.

The faculty of the School of Management have approved several revisions in the undergraduate degree program. Students who begin (or have begun) college-level work before fall quarter 1986 and students who apply to the School of Management for admission before fall quarter 1988 must complete "old" pre-management requirements as listed below.

English composition requirement.

Mathematics—10 cr minimum, including Math 1131 and calculus.

Math 1131 and 1142; or 1131 and 1211. If you have inadequate preparation, you may be required to take Math 0009 before taking 1111 or 1131. If you plan to go beyond elementary calculus, you should take 1211 and 1221 rather than 1142.

Group A (4 or 5 cr)—Consult the pre-management information sheet for a list of appropriate courses.

Group B (9 cr)—Courses chosen from the physical and/or biological sciences, including at least one acceptable intensive laboratory course. Consult the pre-management information sheet for a list of appropriate courses.

Group C (13 cr)—Psy 1001 plus 8 additional credits.

Group D (12 cr)—Acceptable courses in literary and artistic expression. Consult the pre-management information sheet for a list of appropriate courses.

Management and Related Areas (18 cr)—Acct 1024-1025; Econ 1001, 1002; DS 1050.

Students who begin college-level work fall quarter 1986, or who apply to the School of Management for admission fall quarter 1988 or later, must complete the "new" pre-management requirements as listed below:

English composition requirement.

Group A (9 cr minimum, including calculus)—Consult the pre-management information sheet for appropriate courses.

Group B (9 cr)—Courses chosen from the physical and/or biological sciences, including at least one acceptable intensive laboratory course. Consult the pre-management information sheet for appropriate courses.

Group C (13 cr—Psy 1001 plus 4 credits international and 4 credits elective. Consult the pre-management information sheet for appropriate courses.

Group D (8 cr)—Acceptable courses in literary and artistic expression. Consult the pre-management information sheet for appropriate courses.

Management and Related Areas (18 cr)—Acct 1024-1025; Econ 1001, 1002, MSci 1010, 1020.

If you are planning to enter the accounting program—Comp 1027 is also required.

Electives to complete 80-90 credits.

Medical School

Students admitted to the Medical School must complete four-year 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 office, 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 paramedical fields and admission information for all U.S. and Canadian medical schools. Information about tests required of applicants to the Minnesota schools is also available.

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 U.S. and Canada.

Premedical Requirements—There is no prescribed premedical major—any recognized college major is acceptable. Natural 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: 30 cr of English (including composition and literature); mathematics through calculus (Math 1142 or 1211, 1221); Chem 1004-1005, 3100-3101, 3301, 3302 (25 cr); Biol 1009 plus 5 cr of biology, zoology, or genetics; Phys 1104-1105-1106 and 1107-1108-1109, or 1271-1281-1291 and 1275-1285-1295; at least 27 cr taken on A-F grading in humanities, social science, second language, or other liberal arts courses (humanities and literature recommended).

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 240 Williamson Hall or in the Pre-Health Sci-

ence advising office. They must be filed before November 15 of the preceding academic year for enrollment the following fall; it is advisable to submit them as soon after June 15 as spring quarter grades are available. You must take the Medical College Admission Test (spring MCAT preferred) and the Minnesota Multiphasic Personality Inventory. Information about registering for these tests is available in the Pre-Health Science advising office.

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 four-year 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 following courses or their equivalents are prerequisites for admission to the junior year: completion of writing practice requirement or exemption; Chem 1004-1005, 1006, 3100-3101, 3301, 3302, 3305, 3306; Biol 1009, 1106; Anat 3001; Math 1111 or 1201; Phys 1041-1042, 1045-1046; and MedT 1010, 1030, 1031, 1032. Electives should be limited to subjects that satisfy distribution requirements.

The *Undergraduate Health Sciences 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 (625-9490). Registration each quarter must be reviewed by an adviser.

Department of Mortuary Science

The four-year curriculum of the Department 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 writing practice requirement; Mortuary Science Group A, 8-10 credits in speech, accounting, or electives; Mortuary Science Group B, 18-24 credits including one general course in biology, chemistry, human anatomy, microbiology, and public health; Mortuary Science Group C, 16-20 credits, with a minimum of 12 credits in psychology and sociology, including a general course in each; Mortuary Science Group D, 12-15 credits of electives.

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, 400 Botany (624-6464), and in the *Undergraduate Health Sciences Bulletin*.

School of Nursing

A four-year curriculum leads to the B.S.N. degree; one year may be taken in CLA or any other accredited liberal arts college. The program, open to men and women, is designed to prepare students for entry-level positions in all fields of professional nursing.

Selection for admission is based on scores on the ACT examination and grade point average. From this score, applicants are selected according to ranking. Residents of Minnesota and states with tuition reciprocity agreements are given priority. Information about admission requirements may be obtained from the School of Nursing admissions office, 5-160F Health Sciences Unit F (624-3108). A CLA adviser in 30 Johnston Hall is assigned to assist prenursing students with course selection, registration, and academic planning.

The 45-credit requirement for the first prenursing year must include: completion of writing practice requirement or equivalent or exemption, general chemistry (8 cr), general biology (4 cr), cultural anthropology (3 cr), introductory sociology (3 cr), and general psychology (3 cr). Remaining credits must be chosen from the liberal education distribution groups (since the School of Nursing program is heavy in course work in groups B and C, special attention to course work in groups A and D is recommended).

Two populations are admitted: those with no prior nursing credentials and those who are already RNs. These two groups are considered separately. The same admission requirements apply to both groups.

After admission you continue taking general education courses and start courses in the nursing major. An approximate balance between the two areas is maintained.

Further information about admission is presented in the *Undergraduate Health Sciences 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 85 to 90 credits in a college of liberal arts in courses selected to meet the distribution requirements outlined in the *Undergraduate Health Sciences Bulletin*. You must complete these courses with a high C average 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 Sciences advising office, 30 Johnston Hall. For detailed information, see the program bulletin or call the program office, 271 Children's Rehabilitation Center (626-5887), for an appointment with a faculty member.

College of Pharmacy

The College of Pharmacy offers the doctor of pharmacy (Pharm.D.) degree program as the optimal preparation for therapeutic consultants for work in clinical settings. This program requires four years of professional study and is open to applicants who have completed two years of preprofessional study in a college of liberal arts. The program is also open to selected candidates who either have completed the second professional year of a B.S. in pharmacy degree program or hold a B.S. in pharmacy degree. Students admitted with such advanced standing complete the degree after approximately two years of study.

The B.S. program provides the basic preparation for various entry-level careers in the pharmacy profession. This program requires three years of professional study, preceded by two years of pre-

professional study in a college of liberal arts. Graduates of either the B.S. or Pharm.D. program are eligible for state licensure to practice pharmacy.

The two-year preprofessional program, consisting of 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, (624-9490), or from the CLA Pre-Health Sciences advising office, 30 Johnston Hall (624-9006).

Applications for admission to the College of Pharmacy are available from the Office of Admissions, 240 Williamson Hall. Applications, accompanied by an official transcript, should be filed between October 15 and May 15 of the academic year prior to the fall quarter of desired enrollment. The Admissions Committee reviews completed applications and notifies students of its decision as quickly as possible.

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 grade point average of 2.50 in basic sciences. The last two years plus a summer term are spent in the Department of Physical Medicine and Rehabilitation. You must complete 800 hours of supervised clinical practice in physical therapy departments of affiliated hospitals.

For information about admission, consult advisers in the Physical Therapy office, 271 Children's Rehabilitation Center (626-5887), or in the CLA Pre-Health Sciences advising office, 30 Johnston Hall (624-9006). Details about the program are available in the *Undergraduate Health Sciences 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 professional role concentrations beyond the core requirements, two policy area concentrations or one of each. The master of planning degree is a professional degree recognized by the American Institute of Certified Planners and qualifies graduates for associate membership in that organization.

School of Social Work

A B.A. in social welfare or a B.S. 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 science credits, preferably in at least three different subject areas. A course in statistics is 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* and the *School of Social Work Bulletin*.

Theological Study Preparation

If you are preparing for seminary training, you may consult the pretheology adviser in 172 Klæber Court. The CLA major program for pretheology students is

described in the second section of this bulletin. The adviser can assist in planning individual programs, either through the specialized major or through other patterns of study. The major in religious studies, designed for those with interest in a broad understanding of religious movements and values, may also serve pretheology students.

University College

University College provides flexibility in program planning to undergraduates whose needs are not met by other program offerings at the University. UC houses two baccalaureate degree programs on the Twin Cities campus.

The Inter-College Program (ICP), 206 Temporary North of Appleby (624-2004), offers students a credit-based, individualized, baccalaureate degree program drawing upon the curricular offerings and other educational opportunities of the entire University community and incorporates both day school and extension registration.

The ICP degree mechanism provides an alternative to the traditionally structured degree major by providing the flexibility of incorporating significant course work from more than one college to achieve your educational goals. The degree program may include two or three areas of concentration, or may integrate courses from two or more colleges into an interdisciplinary theme. Generally, an approved degree contract includes between 60 and 70 upper division credits.

If you have college-parallel learning experiences, the Inter-College Program will assist you in seeking validation of your experience. If credit is granted for prior learning, it can be incorporated into your ICP degree contract.

ICP students earn either the B.A. or the B.S. degree, depending upon the manner in which they satisfy liberal learning requirements. Each graduates' area of concentration will be noted on the final transcripts.

For more information, call the program's office and sign up for a "First Step" advising session.

University Without Walls (UWW), 201 Wesbrook Hall (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 UWW because they value the freedom to make significant choices about what and how they learn, because they have experiences they can use as foundations for further learning, and because they want to use a variety of educational resources at the University and in the community.

Students are admitted to UWW on the basis of evidence that they have the attributes and academic skills needed to pursue a self-directed degree program (e.g., skills in writing, project design, and educational planning). A degree program can incorporate a variety of learning resources, including University classes, independent study courses, and self-designed projects. Knowledge gained from independent learning prior to admission may be applied if it can be demonstrated and evaluated as college-level learning.

UWW 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: Chinese language and culture, zoo management, urban development administration, preservation of historical architecture, and cardiovascular health and disease.

University College also provides an undergraduate independent study course listing (UC 3075) available to students who wish to pursue projects that go beyond the scope of any single department or college of the University. Projects are interdisciplinary in nature or are done in departments that do not have an undergraduate independent study course for nonmajors. Students will be asked to select an appropriate faculty monitor and to

complete the UC 3075 Independent Study Contract prior to registering. Students may take 3 to 15 credits of UC 3075. Further information may be obtained from the Inter-College Program Office of University College, 206 Temporary North of Appleby.

Group Distribution, World Studies, Cultural Pluralism, and Route II Course Lists



Group Distribution, World Studies, Cultural Pluralism, and Route II Course Lists

Courses Used to Meet Group Requirements

Listed below are courses approved for meeting CLA liberal education (group distribution) requirements described on pages xx-xx. The list is updated annually and is available for consultation in college offices. Group designations are not assigned to directed studies, directed instruction, directed research, and topics courses.

These guidelines will aid in planning group distribution programs:

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. Distribution requirements (except the group B laboratory requirement) may be met by examination (consult your college office). College Level Examination Program (CLEP) tests may not be used to meet distribution requirements.
3. Courses approved for the world studies and U.S. cultural pluralism requirements that are also approved for group distribution requirements may be used to fulfill both requirements.
4. Honors courses or sections may be substituted for regular courses or sections unless otherwise specified.
5. Courses used to meet the English composition requirement and the B.A. second language requirement (including those used in Route II, part B) may not be used to meet distribution requirements.
6. Only if you transfer from General College to CLA may you use appropriate GC courses completed before transfer to meet group distribution requirements.
7. At least one group B course must include a laboratory that meets at least two hours a week. Courses accepted to meet this requirement are marked with asterisks (*).
8. Distribution requirements for the B.F.A., B.M., and B.I.S. programs differ from those for B.A. or B.S. programs. See the first section or the Music, Studio Arts, or B.I.S. offices for information about requirements. In meeting these require-

ments, 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. 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 *3104
Engl 3851, 3852
Fren 3701
Geog 1501
Ling 3001
Math *1111; *1131; *1142; *1201; *1211-1221-1231;
*1311-1321-1331; *1511H-1521H-1531H; *1611-1621
Phil *1001; 1005; *3201; *3202; 3231
Pol *3085
Pay *3801
Soc *3801; *3802
Span 3701
Spch 1313
Stat *1051; *3091

Group B—The Physical and Biological Universe

Observation, identification, description, experimental investigation, and theoretical explanation of natural phenomena; explorations and methods of the scientists of earth, space, matter, and life. (Requirement: 12 to 15 credits for B.A. and B.S.—three 4- or 5-credit courses, one to include a laboratory. Two of the courses must be chosen from the list of group B foundation courses, either as one two-quarter sequence in a particular science or as two one-quarter courses in different sciences. Courses in boldface are foundation courses. Laboratory courses are identified with an asterisk.)

Group C—The Individual and Society

Anth 3001; 3002
Ast 1011; *1015; 1021H; *1025H
BioC 1301; 1302 (if taken with 1303); *1303
Biol 1008; *1009; 1101; *1103; 1105; *1106; 3112
Bot 1009; 1012
Chem *1001-1002; *1003; *1004-1005; *1006; 1008;
*1031-1032; *1041-1042†; *3100-3101; 3301
EBB 3001; 3004
GCB 3002 (if taken for four credits); 3022
Geo *1001; *1002; 1005; 1013; *1021; *1111; 1601
Geog 1401; *1425; 3431
MicB 1101
Phsl *1001; 1002
Phys 1001; 1002; *1005; 1041-1042 *1045-1046; 1061;
*1065; 1071; *1075; 1104-1105-1106; *1107-1108-
1109; 1271-1281-1291; *1275-1285-1295; 1311-
1321-1331-1341; 1411-1421-1431-1441; *1425-
1435-1445
Psy 3031; 3061
WoSt 3202

Group C—The Individual and Society

(Requirement: 16 to 20 credits for B.A. and B.S.—normally four courses—one in each of the three categories and a fourth in one of them.)

1. Individual and Institutional Behavior

Empirical study of individual and institutional behavior; empirical study of psychological, economic, social, cultural, geographical, and political phenomena.

Afro 1011; 1025; 3013; 3061; 3072; 3876
AmIn 1771; 3151
AmSt 3112; 3113; 3114
Anth 1102; 3201
Arch 3001; 3002
Chic 1107
CPsy 1301; 3309
CDis 3101
Econ 1001; 1002; 1004; 1005; 3501; 3701; 3801
Geog 1301; 3101; 3331; 3371
Jour 1001
Ling 1005
Mus 1602
Pol 1001; 1025; 1026; 1054; 3051; 3321; 3562
Pay 1001; 1004-1005; 3001; 3014; 3101; 3201; 3604
Soc 1001; 1002; 1003; 1651; 3102; 3201; 3401
SoAs 1506; 3506
UrbS 3104
WoSt 1001; 1002; 1101; 1102; 3305

2. The Historical Perspective

Historical study of societies and cultures or major aspects thereof.

Afro 1021; 1441; 3001; 3002; 3324; 3421
AmIn 3111; 3112

ANEJ 3501; 3502; 3505
Anth 1101; 3301
Arth 1002; 3577
Chic 1105; 1106; 3441; 3442
Chn 3201; 3202
Clas 1001; 1002; 1003; 1004; 1005; 1006; 1011; 1022;
1033; 1043; 1044; 1055; 1066
EAS 1063; 1461; 1462; 1463; 3201; 3202
Geog 3373
Hist 1001; 1002; 1003; 1011; 1012; 1013; 1051; 1052;
1101; 1151; 1152; 1301; 1302; 1305; 1401; 1402;
1421; 1422; 1431; 1432; 1451; 1452; 1453; 1461;
1462; 1463; 3001; 3002; 3003; 3011; 3012; 3013;
3051; 3052; 3053; 3151; 3152; 3244; 3245; 3401;
3402; 3421; 3422; 3423; 3431; 3432; 3451; 3452;
3453; 3461; 3462; 3463; 3541; 3542; 3543; 3636;
3637; 3704; 3707; 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; 1201; 1202; 1211; 1212; 1241; 3201;
3202; 3211; 3212
LAS 3131
MidE 3505; 3507; 3508; 3511; 3512; 3541; 3542; 3543
Scan 1504
SoAs 3501; 3502
WoSt 3103

3. Social and Philosophical Analysis

Analytical study of social, political, moral, philosophical, and religious thought.

AmIn 3211
AmSt 1001; 1002; 1003
Clas 1042; 3071; 3073
EAS 1032
Hum 3625
ID 3101
JwSt 1034; 3034
MidE 1536; 3555
Phil 1002; 1003; 1004; 1102; 1103; 1104; 3001; 3002;
3003; 3004; 3302; 3304
Pol 1041; 1061
RelS 1001; 1031; 1032; 1034; 1035; 1036
SoAs 1504; 3411; 3412
WoSt 3838

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. and B.S.—normally three courses.)

Afro 1301; 3057; 3591; 3592; 3601
AmIn 3116
AmSt 3111
ANEJ 1001; 1002; 1003; 3001; 3002; 3003; 3251
Arch 1021; 1022

Group Distribution, World Studies, Cultural Pluralism, and Route II Course Lists

ArtH 1001; 1008; 1016; 1016H; 1921; 3008; 3009;
3011; 3012; 3013; 3014; 3935; 3936
ArtS 1101; 1104; 1301; 1302; 1401; 1402; 1504; 1510;
1520; 1530; 1540 (1510, 1520, 1530, and 1540 may
be taken only once to meet group D requirements)
1701; 1802; 1811; 1812; 3131
Chic 3213; 3507; 3508
Chn 3161; 3162; 3163
Clas 3082
CLit 1921
Dnce 1101; 3401; 3402
EAS 3013; 3165
Engl 1005; 1013, 1016; 1017; 1018; 1019; 1069; 1241;
1591; 1621; 1671; 3111; 3112; 3113; 3115; 3116;
3117; 3118; 3119; 3218; 3241; 3242; 3251; 3252;
3261; 3355; 3356; 3357; 3411; 3412; 3413; 3591;
3592; 3621; 3631; 3671
Fren 3101; 3103; 3104; 3202
Hum 1301; 3102; 3103; 3701; 3755
Ital 3301; 3303; 3305
Jpn 3161; 3163; 3164
JwSt 3115
MidE 3213; 3601; 3602
Mus 1001; 1021; 1410; 1420; 1430; (1410, 1420, 1430
must be taken for 3-4 credits per course) 1501;
1804; 3021
Phil 3502
Port 3211; 3212; 3213
Russ 1304; 3401; 3402; 3403; 3421; 3422
Scan 3503; 3505; 3602; 3604; 3605; 3607; 3618
SoAS 3456
Span 3104; 3211; 3212; 3213; 3615
Th 1101; 1102; 1301; 1804; 1805; 3171; 3172
WoSt 3303; 3306; 3307

Courses Used to Meet World Studies Requirement

Courses listed below may be used to fulfill the world studies requirement for the B.A. and B.I.S. degrees. Honors courses or sections and courses cross-listed in other departments may be substituted for courses listed below. The 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)

Afro 1021; 1441; 3001; 3002; 3013; 3253; 3301; 5301,
5800
AmIn 3026; 3036; 3111; 3112; 3116; 3151; 3152; 3211;
5048
ANEJ 3101; 3117; 3251; 3501, 3502, 3505; 5501, 5502,
5505
Anth 1102; 3131; 3211; 3221; 3222; 3223; 3241; 3251;
3261; 3281; 3293; 3303; 3521; 3533; 5102; 5112;
5114; 5115; 5116; 5118; 5121; 5131; 5132; 5141;
5151; 5153; 5154; 5161; 5185; 5187
Arch 5057

ArtH 1016; 3013; 3014; 3015; 3142; 3909; 3935; 5725;
5765; 5766; 5767; 5769; 5775; 5776; 5777; 5911;
5915; 5916
Chic 1105; 3427
Chn 3063; 3064; 3161; 3162; 3163; 3165; 3201; 3202
CPsy 3332
EAS 1032; 1063; 1461; 1462; 1463; 3013; 3201; 3202;
3211; 3231; 3281; 3300; 3464; 3465; 3467; 3468;
3471; 3472; 3808
Econ 5301; 5311; 5315; 5331; 5341
FoSt 1120/3120; 1240/3240
Geog 3121; 3131; 3141; 3211; 3212; 3213; 3215; 3221;
5131; 5132; 5142; 5191; 5211; 5212; 5215; 5322
Hebr 3301; 3304; 3307
Hist 1051; 1401; 1402; 1403; 1431; 1432; 1451; 1452;
1453; 1461; 1462; 1463; 3043; 3051; 3401; 3402;
3403; 3410; 3411; 3412; 3424; 3425; 3426; 3427;
3431; 3432; 3433; 3434; 3451; 3452; 3453; 3461;
3462; 3463; 3464; 3465; 3467; 3468; 3471; 3472;
3480; 3481; 3482; 3484; 3485; 3486; 3487; 3488;
3489; 5051, 5052, 5053; 5137; 5274, 5275; 5419;
5420; 5432; 5444; 5445; 5447; 5455; 5461; 5463;
5464; 5465; 5467; 5468; 5471; 5472; 5473; 5474;
5489; 5491; 5501, 5502, 5503; 5510; 5514; 5515;
5517; 5518; 5519; 5521; 5522; 5534; 5774-5775;
5901, 5902, 5903; 5930; 5931
Hum 1201; 1202; 1211; 1212; 1241; 3543; 3643; 5833
Jpn 3163, 3164
JwSt 3100; 3315
MidE 1536; 3505; 3508; 3511; 3541; 3542; 3543; 3544;
3545; 3555; 5505; 5508; 5521; 5523; 5525; 5970
Mus 1804; 3709; 3807, 3808; 5665; 5705; 5804; 5811
Pol 3773; 5453; 5473; 5476; 5477; 5478; 5479
Port 3212; 3213; 3501; 3502; 3603; 5210
RelS 1031; 1032; 1034; 1036
Soc 3315; 3551; 3671; 5675
SoAS 1506; 3411; 3501; 3502; 3506; 5202; 5203; 5411;
5500; 5520; 5531; 5532; 5535; 5710; 5970
Span 1502; 1503; 3251; 3252; 3253; 3512; 3601; 3605;
3615
WoSt 1102; 3402; 5401

Courses Used to Meet U.S. Cultural Pluralism Requirement

Courses listed below may be used to fulfill the U.S. cultural pluralism requirement for the B.A. and B.I.S. degrees. B.A. and B.I.S. degree students who start their college work fall, 1986, or later are required to complete the requirement. Honors courses or sections and courses cross-listed in other departments may be substituted for courses listed below. The disciplinary or interdisciplinary courses deal with major aspects of the Afro-American, American Indian, Asian American, and Chicano cultures. (Requirement: two courses, normally 8-10 credits.)

Afro 1011; 1025; 1301; 1441; 3072; 3105; 3108; 3324;
3543; 3591; 3592; 3864; 3865
Am Ind 1771; 3111; 3112
Chic 1106; 1107; 3210; 3212; 3213 3441; 3442; 3507;
3508; 3511
EAS 3868
Eng 1591; 3591; 3592
Geog 3101; 3375
Hist 1305; 3801; 3812; 3868
Ling 3812
Pol 3739
Th 1805
WoSt 3302

1986 Second Language Requirement

The 1986 Second Language Requirement goes into effect fall 1986 for B.A., B.I.S., and B.F.A. students who enter college or who transfer into the college with fewer than 39 credits. It goes into effect fall 1988 for B.A. and B.F.A. students who enter with 39 or more credits.

Graduation Requirement—The graduation requirement for the B.A. and B.F.A. degrees requires students to demonstrate proficiency usually attained after the first six quarters of college study in one language. The graduation requirement for the B.I.S. degree requires students to demonstrate proficiency equal to the college's entrance standard.

Entrance Standard—Students who wish to study the most commonly-taught languages, French, German, and Spanish, must meet a second-language entrance standard, demonstrating the proficiency usually attained after the first three quarters of college study (usually three to four years in high school).

The standard will be phased into operation by requiring one quarter proficiency for freshmen and transfer students with

fewer than 39 credits entering the college fall 1986, two quarter proficiency for fall 1987, and three quarter proficiency for fall 1988 and beyond.

Proficiency tests to determine appropriate placement or fulfillment of the entrance standard and graduation requirement will be given several times during the year. Students should contact their language department.

Students who meet the entrance standard may continue their study at higher levels in the same language, or they may begin study of any other language. Students who do not meet the standard who register in beginning French, German, or Spanish, will receive credit for beginning courses, but the credit will not apply toward graduation. Students who do not meet the standard have the option to register in a language other than French, German, and Spanish, and the credit will count toward graduation.

Former Second Language Requirement

The former Second Language Requirement is open only to students who entered CLA before fall 1986, or who enter CLA with more than 39 or more credits before fall 1988. It will not be open to students entering after fall 1988.

The CLA second language requirement for the B.A. degree may be met by either of two "routes."

Route I: Complete through the fifth-quarter level (at least 23 credits) study in a language other than your native tongue, or pass a validation examination at that level.

High school language study usually relates to the requirement as follows:

High School Study

5 years
4 years
3 years
2 years
1 year

Additional College Study

requirement satisfied
at least 3 cr in same language at higher level
at least 8 cr in same language at higher level
at least 13 cr in same language at higher level
at least 18 cr in same language at higher level

Group Distribution, World Studies, Cultural Pluralism, and Route II Course Lists

College language study that repeats high school study is counted instead of your high school work toward meeting the language requirement.

Students with two or more years of high school Latin may satisfy the requirement by continuing Latin studies according to the schedule above or by completing 15 credits in another language (high school study in a second language counts

toward the 15 credits needed to meet Route II requirement A below).

Route II: Complete at least 27 credits, as follows:

A. At least 15 credits in a second language or validation at the third quarter level. High school study usually relates to the requirement as follows:

<i>High School Study</i>	<i>Additional College Study</i>
3 years or more	none in college (validation not required)
2 years	5 cr in same language at higher level
1 year	10 cr in same language at higher level

B. 12 credits (7 if you have completed four years of high school study in one language) in courses concerned with a country or countries that use the language chosen. A list of courses that may be used appears below; it is frequently updated, and a current list is available in college offices. Courses elected for this purpose may not be used to satisfy group distribution requirements. (Study in a language beyond the 15-credit level may be used as part of this 12-credit requirement.)

Route II Course List

Courses that may be used to meet the "cultures and societies" portion of Route II (requirement B) are listed below. If you are following Route II, you should check with your college office to learn of changes or additions to this list.

ARABIC

Anth 3251
 ArtH 3909
 Hist 1431, 1432, 3043, 3431, 3432, 3433, 3434
 MidE 1536, 3211, 3212, 3505, 3541, 3542, 3543, 5521
 Pol 5477
 RelS 1036

CHINESE

Chn 1201, 1202, 3063, 3161, 3162
 Anth 3281
 ArtH 5765, 5766
 EAS 1032, 1063, 1461, 1462, 1463, 3211, 3300, 3464, 3465, 3467, 3468, 3471
 Geog 3211, 5211

Hist 1461, 1462, 1463, 3461, 3462, 3463, 3464, 3465, 3467, 3468, 5461, 5463, 5465, 5467, 5468

Hum 1201, 3202

Pol 5473

RelS 1032

DAKOTA

AmIn 3036, 3111, 3112, 3242, 5214

Anth 3211

GC 1811, 1812, 1813

Hist 3871, 3872

DUTCH

Dtch 3510, 3610

Hist 3622

FRENCH

Fren 3599, 3601, 3602, 3603, 3606, 3607

Frit 3590, 3604, 3608, 5587

ArtH 3303, 5357, 5441, 5442

Hist 3616, 3624, 3625, 3845, 5211, 5212, 5231

Phil 5034

GERMAN

Ger 3601, 3602, 3603, 3604, 3610, 3641, 5601, 5602, 5603

ArtH 5443

Hist 3623, 3631, 3632, 3633, 3747, 3748

Phil 5055

GREEK

Clas 1001, 1002, 1003, 1011, 1019, 1022, 1033, 1042, 1043, 1061, 3006, 3007, 3015, 3070, 3071, 3072, 3081, 3082, 3083, 3088, 3122, 3145, 5002, 5003, 5004, 5005, 5006, 5007, 5017, 5020, 5080, 5081, 5082, 5083, 5085, 5086, 5101, 5110, 5122, 5145, 5400

ArtH 3152, 5106, 5108, 5112

Hist 1052, 3052, 3515, 3767, 5061, 5131, 5276

Hum 1111, 3111, 3191

Phil 3001, 3002, 3005, 5004, 5008, 5012, 5020

Pol 5654

Spch 5611

Former Second Language Requirement

MODERN GREEK

Clas 1001, 1002, 1003, 1042, 1061 3015
Hist 3767, 5131, 5274, 5275, 5276
Hum 3878

HEBREW

ANEJ 1501, 1502, 1503, 1504 (extension only), 3101,
3117, 3251, 3501, 3502, 3505
Hist 3607, 3775
Hum 1241
JwSt 1034, 3034, 3100, 3115, 3125, 3126, 3142, 3143,
3315, 3521, 5900
Pol 5477
RelS 1034

ITALIAN

Ital 3555, 5559, 5601, 5602, 5603, 5609
Frlt 3604, 3608, 3590, 5587
ArtH 5306, 5307, 5313, 5314
Hist 3621, 3754, 3755, 3756
Mus 5663

JAPANESE

Jpn 3163, 3164
Anth 3281
ArtH 3281, 5767
EAS 1032, 1462, 1463, 3201, 3202, 3300, 3468, 3471,
3472
Geog 3211, 5211
Hist 1462, 1463, 3462, 3463, 3471, 3472, 5471, 5472,
5473
Pol 5467
RelS 1032

LATIN

Clas 1004, 1005, 1006, 1012, 1019, 1042, 1043, 1044,
1055, 1066, 3006, 3008, 3015, 3070, 3073, 3081,
3083, 3088, 3145, 3162, 5002, 5003, 5004, 5005,
5006, 5008, 5013, 5018, 5020, 5073, 5081, 5083,
5104, 5109, 5145, 5400
ArtH 3162, 5104, 5105, 5107, 5109
Hist 1053, 3053, 3515, 5071, 5115, 5116
Hum 1113, 3113, 3193
Phil 3001, 3002, 5020, 5021
Spch 5611

OJIBWAY

Amln 3026, 3111, 3112, 3242, 5214
Anth 3211
GC 1811, 1812, 1813
Hist 3871, 3872

PERSIAN

Anth 3251
ArtH 3909
Hist 5274, 5275
MidE 3505, 3511, 3512, 3555, 3601, 3602
Pol 5477

POLISH

Plsh 3601, 3602
Hist 3244, 3245
Slav 1501

PORTUGUESE

Port 3603
Econ 5311, 5341
Geog 3121, 5132
Hist 1401, 1402, 1403, 3401, 3402, 3403, 3410, 3411,
3412, 5420
LAS 3131, 5120
Mus 5704, 5705
Pol 5479
Soc 3315, 3671
Span 1501, 1502, 1503, 3601
SpPt 3605, 3610

SCANDINAVIAN (Danish, Finnish, Norwegian, Swedish)

Scan 1504, 3501, 3503, 3505, 3601, 3604, 3605, 3606,
3607, 3611, 3613, 3614, 3615, 3618, 5501, 5502,
5601, 5613, 5631
ArtH 3654, 5641, 5644, 5645
Geog 5173
Hist 3271, 3272, 3273, 5252
Phil 5054
Pol 5463
Finnish only: Scan 5421

RUSSIAN

Russ 3301, 3421, 3422, 3501, 3502, 3503, 3511, 3512,
5201, 5202, 5203, 5211, 5401, 5404
Hist 3767, 5134, 5135, 5136, 5264, 5265, 5266, 5294,
5295
Pol 5471

SOUTH ASIAN LANGUAGES (Hindi, Marathi, Sanskrit, Turkish, Urdu)

Anth 3261
ArtH 3014
Geog 3212/5212
Hist 3043, 3480, 3481, 3482, 3488, 3489, 5455, 5489,
5491
Hum 1211, 1212
MidE 3508
Mus 5811
RelS 1031
SoAS 1504, 1506, 3411, 3501, 3502, 3506, 5201, 5203,
5411

SPANISH

Span 1501, 1502, 1503, 3601, 3602, 3605, 3610, 3614,
3615, 3620
Anth 3221, 3222
ArtH 5911
Chic 1105, 1106, 3212, 3221, 3335, 3341, 3345, 3427,
3428, 3507, 3510, 3615
Econ 5311, 5341
Geog 3121, 3131, 5131, 5132
Hist 1401, 1402, 1403, 3401, 3402, 3403, 3410, 3424,
3425, 3426, 3427, 3428, 3715, 3716, 5419, 5420
LAS 3131, 5120
Mus 5704, 5705
Pol 5479
Port 3603
Soc 3315, 3671
SpPt 3605, 3610

Group Distribution, World Studies, Cultural Pluralism, and Route II Course Lists

SWAHILI

Afro 3001, 3002, 3013, 3021, 3022, 3301, 5301

Anth 3241, 3251

Geog 3141, 5142, 5143, 5191

Hist 1431, 1432, 3431, 3432, 3433, 3434, 5432, 5444,
5445, 5447

Pol 5478

TURKISH

Hist 5137, 5274, 5275

MidE 3505, 3511, 3512

Pol 5477

Administration and Faculty



Administration and Faculty

University Regents

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David M. Lebedoff, Minneapolis, Vice
Chair

Wendell R. Anderson, Wayzata
Charles H. Casey, West Concord
Willis K. Drake, Edina
Erwin L. Goldfine, Duluth
Wally Hilke, St. Paul
Verne E. Long, Pipestone
Wenda W. Moore, Minneapolis
David K. Roe, Minneapolis
Stanley D. Sahlstrom, Crookston
Mary T. Schertler, St. Paul

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Institutional Relations
David M. Lilly, Vice President for Finance
and Operations
V. Rama Murthy, Acting Vice President
for Academic Affairs and Provost of the
Twin Cities Campus
Richard J. Sauer, Vice President for
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Economics
Neal A. Vanselow, Vice President for
Health Sciences
Frank B. Wilderson, Vice President for
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College of Liberal Arts Administrators

Fred E. Lukermann, Dean
Craig Swan, Associate Dean and
Executive Officer
Frederick Asher, Associate Dean for
Faculty Affairs
Julieann Carson, Associate Dean for
Institutional Relations
Associate Dean for Curriculum—to be
announced
Stephen M. Wilbers, Director of Student
Services
Glen Holt, Director of Honors

College of Liberal Arts Faculty

Afro-American and African Studies

Coifman, Victoria, Assistant Professor
Ph.D., University of Wisconsin

Pike, Charles, Assistant Professor
Ph.D., University of Wisconsin

Southall, Geneva, Professor
Ph.D., University of Iowa

Taborn, John, Associate Professor
Ph.D., University of Minnesota

Ward, John, Professor
M.A., Indiana University

Wright, John, Associate Professor
Ph.D., University of Minnesota

American Studies

Delattre, Roland, Professor
Ph.D., Yale University

Hogan, Linda, Associate Professor
M.A., University of Colorado

Lipsitz, George, Assistant Professor
Ph.D., University of Wisconsin

May, Elaine Tyler, Associate Professor
Ph.D., University of California, Los Angeles

May, Lary, Assistant Professor
Ph.D., University of California, Los Angeles

Yates, Gayle Graham, Associate Professor
Ph.D., University of Minnesota

Ancient Near Eastern and Jewish Studies

Eshel, Ronit, Instructor
M.A., Antioch University

Paradise, Jonathan, Associate Professor
Ph.D., University of Pennsylvania

Reisman, Daniel, Associate Professor
Ph.D., University of Pennsylvania

Zahavy, Tzvee, Associate Professor
Ph.D., Brown University

Anthropology

Dunnigan, Timothy, Associate Professor
Ph.D., University of Arizona

Etkin, Nina, Associate Professor
Ph.D., Washington University

Gerlach, Luther, Professor
Ph.D., University of London

Gibbon, Guy, Associate Professor
Ph.D., University of Wisconsin

Gudeman, Stephen, Professor
Ph.D., University of Cambridge, England

Hastorf, Christine, Assistant Professor
Ph.D., University of California, Los Angeles

Ingham, John, Associate Professor
Ph.D., University of California, Berkeley

Johnson, Elden, Professor
M.A., University of Minnesota

Lipset, David, Assistant Professor
Ph.D., University of California, San Diego

Miller, Frank, Professor
Ph.D., Harvard University

Ogan, Eugene, Professor
Ph.D., Harvard University

Penn, Mischa, Associate Professor
B.A., University of Minnesota

Prell, Riv Ellen, Assistant Professor
Ph.D., University of Chicago

Rowe, William, Professor
Ph.D., Cornell University

Spector, Janet, Associate Professor
Ph.D., University of Wisconsin

Spencer, Robert, Professor Emeritus
Ph.D., University of California, Berkeley

Art History

Asher, Frederick, Associate Dean and Professor
Ph.D., University of Chicago

Canedy, Norman, Professor
Ph.D., Columbia University

Cooper, Frederick, Professor
Ph.D., University of Pittsburgh

Haxthausen, Charles, Associate Professor
Ph.D., Columbia University

Marling, Karal Ann, Professor
Ph.D., Bryn Mawr College

McNally, Sheila, Professor
Ph.D., Harvard University

Nelson, Marion, Professor
Ph.D., University of Minnesota

Poor, Robert, Professor
Ph.D., University of Chicago

Silberman, Robert, Assistant Professor
Ph.D., Columbia University

Simon, Sidney, Professor
Ph.D., Harvard University

Steyaert, John, Associate Professor
Ph.D., University of Michigan

Stoughton, Michael, Associate Professor
Ph.D., University of Michigan

Weisberg, Gabriel, Professor
Ph.D., Johns Hopkins University

Arts, Studio

Baldwin, Guy, Associate Professor
M.F.A., University of Wisconsin

Bethke, Karl, Professor
M.F.A., University of Minnesota

Caglioti, Victor, Associate Professor
B.S., New York University

Cowette, Thomas, Associate Professor
B.F.A., Minneapolis College of Art and Design

Feinberg, David, Associate Professor
M.F.A., Cranbrook Academy of Art

Gray, Lynn, Associate Professor
M.F.A., University of Oklahoma

Hallman, Gary, Associate Professor
M.F.A., University of Minnesota

Henkel, James, Associate Professor
M.F.A. Florida State University

Hoard, Curtis, Professor
M.F.A., University of Wisconsin

Katsiaficas, Mary, Associate Professor
M.F.A., University of Washington, Seattle

Krepps, Jerald, Associate Professor
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Weisberg, Sanford, Professor
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Berry, Douglas, Associate Professor
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Crellin, Gail, Associate Professor
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Fredricks, M.V., Professor Emeritus
Ph.D., University of Minnesota

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Ph.D., University of Wisconsin

Josal, Wendell, Professor
Ph.D., Northwestern University

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Norwood, James, Assistant Professor
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Geiger, Susan, Assistant Professor
Ph.D., University of Dar es Salaam, Tanzania

Kaminsky, Amy, Associate Professor
Ph.D., Pennsylvania State University

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Ph.D., Washington University

Index



Index

A

Abbreviations and Symbols, 32
Academic Conduct, 28
Academic Skills, 171
Access to Records, 2
Admission Procedures, 11
 Adult Special, 15
 Advanced Standing, Transfer, 14
 Application Procedure, 13
 Before High School Graduation, 14
 Freshman, 13
 Honors Program, 15
 Incoming Student Services, 16
 Martin Luther King Program, 15
 Nondegree —Adult Special,
 Readmission, 17, 27
 Senior Citizen, 17
Adult Special Admission, 15
Advertising,—see Journalism and Mass
 Communication
Advising, 19
 Offices, 19
Aerospace Studies, 33, 215
African Studies, 33
Afro-American Studies, 33
Agriculture, College of, 35,
Akkadian, 38
Alphabetical Registration,
American Indian Studies, 35
American Studies, 37
Ancient Near Eastern and
 Jewish Studies, 38
Anthropology, 41
Appeals—see Grievance Procedures
Arabic, 234
Aramaic, 39
Archaeology, 79
Architecture, 45, 262
Art History, 48
Arts, Studio, 53
Asian Studies
 East Asian Studies, 96
 Middle Eastern and South Asian Studies, 233
 South and Southwest Asian Studies, 233
Associate in Liberal Arts Degree, 7
Astronomy, 57
Attendance at Classes, 18, 26
Auditing Classes, 18

B

Bachelor of Arts Degree, 6, 12
Bachelor of Fine Arts Degree, 7, 12
Bachelor of Individualized Studies, 7, 11, 21, 160
Bachelor of Music Degree, 7, 12
Bachelor of Science Degree, 7, 12
Bacteriology—see Microbiology
Behavior, Classroom, 26
Behavioral Biology—see Ecology and Behavioral
 Biology
Biblical Studies, 58
Biochemistry, 59

Biological Sciences, College of, 60, 262
Biology, 60
Biometry, 62
B.I.S. degree, 7, 11, 12, 21, 160
Botany, 63
Broadcast Journalism, 164
Broadcasting
 Speech-Communication, 245
Business Administration—see Management, School of

C

Cancel-Add Procedures, 18
 Limits, 18
 Cancellations, 18
 Financial Aid and, 19
 From College, 19
 From Courses, 19
 Late, 19
Career Development Office, 29
Cell Biology—see Genetics and Cell Biology
Changes of Registration, 18
Chemistry, 65
Chicano Studies, 69
Child Psychology, 70
Chinese, 91, 93
Class Attendance, 18, 26
Class Schedule, 2, 16
Classical Civilization, 73
Classical Studies, 74
Classroom Behavior, 26
College Level Examination Program (CLEP), 23
College of Liberal Arts (CLA), 6
 Educational Policy and Purpose, 6
 Liberal Education and the Student, 6
 Procedures and Regulations, 6-28
 Services, 28
Communication
 Composition and Communication, 108
 Journalism, 164, 265
 Speech-Communication, 245
Communication Disorders, 80
Comparative Literature, 83
Composition, 10, 12, 108
Computer Science, 84
Conduct Committee, 27, 28
Continuing Education and Extension, 18
Courses
 Additions, 18
 Attendance, 18, 27
 Audited, 18
 Cancellations, 18
 Descriptions, 33-259
 Independent Study, 22
 Interdepartmental Study, 22
 Levels, 32
 No-Credit, 18
 Non-CLA, 17
 Numbering System, 32
 Registration, 16
 Repetition, 17
 Standards, 23
 Symbols and Abbreviations, 32

Credits, 11

- And Grade Standards, 23
- Continuing Education and Extension, 18
- Credit Loads, 17
- Graduate School, 18
- No-Credit Courses, 18
- Non-CLA, 17
- For Prerequisite Courses, 18
- Requirements, 11
- Old Grade and Credit Requirements, 25
- Value, 23

Criminal Justice Studies—see Sociology

Cross-Disciplinary Studies—see Individually

Designed Interdepartmental Major

Cultural Pluralism Requirement, 9, 12, 276

D

- Dance, 88
- Danish, 221, 225
- Dean, letter from, 4
- Dean's List, 25
- Debate—see Speech-Communication
- Degrees, 6
 - Associate in Liberal Arts, 6, 7, 8
 - Bachelor of Arts, 6
 - Bachelor of Fine Arts, 7
 - Bachelor of Individualized Studies, 7, 11
 - Bachelor of Music, 7
 - Bachelor of Science, 7
 - Earned Concurrently With Other Degrees, 7
 - Second Degrees, Second Majors, 7
- Degree Requirements, 7-12
 - Credit Requirements, 12
 - Cultural Pluralism, 9, 12, 276
 - Distribution Requirements, 7, 12, 274
 - English Composition Requirement, 10, 12, 108
 - If You Dropped Out, 11
 - Major Requirements, 10, 12
 - Minor, 11, 12
 - Second Language Requirement, 8, 9, 12, 277
 - World Studies Requirement, 9, 12, 276
- Dentistry, School of, 263
- Departmental Majors, 10
- Distribution Requirements, 7, 12, 274
- Directed Instruction, 22
 - Research, 22
 - Studies, 22
- Divisional Offices, 19
- Double Major, 7, 10
- Dropping From College, 19
- Dutch, 134, 138

E

- East Asian Studies, 90
- East European Studies, 218, 220
- Ecology and Behavioral Biology, 95
- Economics, 98
- Education, College of, 102, 264
- English, 102
- English as a Second Language, 110
- English Composition, 10, 12, 108
 - Degree Requirements, 10, 12, 108
 - Exemption From Requirement, 108
 - Placement, 108
 - Preparatory, 108

Equal Opportunity Statement, 2

Evening Classes, 18

Examinations, 23

- College Level Examination Program (CLEP), 23
- Demonstration of Proficiency in Prerequisite Courses, 23

Final, 26

For Credit, 23

To Meet Language Requirement, 23

Extension Division—see Continuing Education and Extension

Extra Credit Registration, 22

F

Fees and Expenses—see *General Information Bulletin*

Field Experience Learning, 22

Film Studies, 110

Final Examinations, 26

Financial Aids, Scholarships, Awards, 29

Finnish, 221, 225

Foreign Study, 23, 110

Forestry, College of, 116

French, 116, 118

French and Italian, 118, 122

Freshman Admission, 13

Freshman English—see English Composition

G

General Information, 6-30

Genetics and Cell Biology, 123

Geography, 125

Geology and Geophysics, 130

German, 134

Grades, 23

Dean's List, 25

Old Grade and Credit Requirements, 25

Reports, 25

Satisfactory Progress, 25

S-N System, 23

Symbols, 23

Use of D Grades, 24

Graduation, Application for, 13

Graduation Requirements, 11

Current, 7

If You Dropped Out, 11

Greek, 74, 76

Greek-Latin, 74

Greek-Modern, 76

Grievance Procedures and Appeals, 28

Group Distribution Requirements, 7, 12, 274

H

Handicapped Students, Aids for, 30

Hebrew, 38, 39

High School Courses, Repetition of, 18

Hindi, 233, 234

History, 102

History of Medicine, 152

History of Science and Technology, 153

Home Economics, College of, 155

Index

Honors Opportunities, 20, 155
Admission, 15
Colloquia, 20
Courses, 20, 155
Departmental, 21, 155
Freshman-Sophomore, 20
Graduation With Honors, 20
Honors Office, 20, 155
Junior-Senior, 21
Seminars, 20
How to Register, 16, *Class Schedule*
How to Study Course, 171
Humanities, 155
Humphrey, Hubert H., Institute of Public Affairs, 270

I

Incoming Student Services—See Prospective Student Services
Orientation, 16
Incompletes, 24
Independent Study, 22
Indian Studies, American, 35
Individualized Studies Degree Program (B.I.S.), 7, 11, 12, 21, 160
Individualized Study Abroad, 115
Individually Designed Interdepartmental Majors, 10, 21, 160
Information, Where to Find, 16
Interdepartmental Majors, 10, 21, 160
Individually Designed, 21
Interdepartmental Study, 10, 22, 161
Interdisciplinary Programs—see individual programs
International Communication
Journalism, 164, 265
Speech-Communication, 245
International Relations, 161
Islamic—see Middle Eastern and Islamic Studies
Italian, 116, 121

J

Japanese, 90, 94
Jewish Studies, 38, 40
Job Placement—see Career Development Office
Journalism and Mass Communication, 164, 265

L

Language Requirement, 8, 12, 277
Latin, 74, 77
Latin American Studies, 169
Law School, 265
Learning and Academic Skills, 171
Letter From the Dean, 4
Liberal Education, 6
Group Distribution Plan, 7, 274
Linguistics, 171
Loans, 29

M

Majors
Admission to, 6
Bachelor of Individualized Studies, 7, 11, 12, 21, 160
Departmental, 10
Double Major, 7
Individually Designed, 10, 21, 160
Interdepartmental, 10, 21, 160
Requirements, 10, 12 department listings
Sequences, 10
Second Major, 7
Management, School of, 173, 265
Marathi, 233, 234
Martin Luther King Program, 21
Admission, 15
Mass Communication—see Journalism
Mathematics, 174
Medical School, 266
Medical Technology, Division of, 267
Microbiology, 180
Middle Eastern and South Asian Studies, 233
Military Science, 216
Minimum/Maximum Credit Loads, 17
Minor, 11
Modern Greek—see Classical Studies
Mortuary Science, Department of, 268
Music, 182

N

Naval Science, 217
Near and Middle Eastern Studies—see South and Southwest Asian Studies
Non-CLA Courses, 17
Nondegree and Part-Time Status, 15
Norwegian, 221, 225
Nursing, School of, 268

O

Occupational Therapy, Program in, 269
Official Daily Bulletin, 2
Office for Special Learning Opportunities (OSLO), 22
Orientation, 16
Outside-of-Major Requirement, 11

P

Part-Time Study—see Adult Special Admission
Persian, 233, 237
Pharmacy, College of, 269
Philosophy, 191
Photography, Art—see Studio Arts
Photojournalism—see Journalism and Mass Communication
Physical Therapy, Program in, 269
Physics, 196
Physiology, 201
Placement Services, 29
Pluralism, Cultural, 9, 12, 276

Polish, 218, 220
 Political Science, 202
 Portuguese, 237, 243
 Premajor Advising, 19
 Preparatory Courses, Required, 11,
 department listings, 33-259
 Preparatory English Composition—see Composition
 Preprofessional Curricula, 262-271
 Pretheology Program—see Theological Study
 Preparation
 Probation, 27
 Proficiency by Examination, 23
 Prospective Student Services, 13
 Psychology, 209
 Public Affairs, 213
 Public Health, 213

R

Radio-Television
 Journalism, 164, 265
 Speech-Communication, 245
 Readmission to College, 27
 Records, Student, 26
 Confidentiality and Access, 2
 Retention of, 26
 Registration, 16
 Changes, 18
 For Independent and Directed Study, 22
 Limits, 17
 Schedule, 16
 Regulations, 6-30
 Religious Activities, 30
 Religious Studies, 214
 Repeating Courses, 17
 College, 17
 High School, 17
 Required Preparatory Courses, 11, department
 listings, 33-259
 Reserve Officers' Training Corps, 215
 Restrictions on S-N Credits, 23
 Route II Course Lists, 278
 Russian, 218
 Russian and East European Studies, 218

S

Sanskrit, 233, 237
 Satisfactory Progress, 25
 Scandinavian, 221, 222
 Scholarships, 29
 Scholastic Conduct, 28
 Scholastic Probation, 27
 Scholastic Standing, 28
 Second Degrees, Second Majors, 7
 Second Language Requirement, 8, 9, 277
 Senior Citizen Admission, 17
 Services
 College, 28
 University, 29
 SIB—see Student Intermediary Board
 Slavic, 219, 221
 S-N Grading System, 23
 Social Work, 270
 Sociology, 225
 South and Southwest Asian Studies, 233

SPAN, 115
 Spanish, 237, 239
 Spanish and Portuguese, 237, 245
 Spanish-Portuguese, 237, 245
 Special Learning Opportunities, 20
 Office for, 22
 Speech-Communication, 245
 Statistics, 249
 Student Activities, 30
 Student Conduct, 27-28
 Student Intermediary Board, 27
 Student Misconduct, 27-28
 Student Scholastic Standing Committee, 28
 Student Services
 Advising, 19
 Financial Aids, Scholarships, Awards, 29
 Handicapped Students, 30
 Martin Luther King Program, 21
 Placement, Job, 29
 Scholastic Standing Committee, 28
 Student Support Services, 28, 29
 Studio Arts, 53
 Sumerian, 38, 41
 Support Services, 28
 Suspension, 27
 Swedish, 221, 225
 Symbols, 32

T

Technology, Institute of, 250
 Television—see Journalism and Mass
 Communication
 Theatre Arts, 25
 Theological Study Preparation, 254, 270
 Transcripts, 25
 Transfer Students, 14
 Tuition—see *General Information Bulletin*
 Turkish, 233, 237

U

University College, 270
 University of Minnesota
 Services to Students, 29
 Urban Studies, 255
 Urdu, 233, 237

V

Veterans Benefits—see *General Information
 Bulletin*
 Veterans Services, 30

W

Western European Area Studies, 256
 Women's Studies, 256
 World Studies Requirement, 9, 12, 276

Z

Zoology, 259

BUILDING ABBREVIATIONS AND BUILDING ACCESSIBILITY INFORMATION

MINNEAPOLIS

West Bank

AndH, Anderson Hall ♯*

ArtB, Art Building (2020 Washington Ave S) □

BlegH, Blegen Hall ♯* L

FergH, Ferguson Hall ♯* L

HHH Ctr, Humphrey Center ♯* L

Law, Law Building ♯* L

MdbH, Middlebrook Hall ♯* L

Mgmt/Econ, Management/Economics Building ♯*

OMWL, O Meredith Wilson Library ♯* L

PeoCtr, People's Center (2000 5th Street)

RarigC, Rarig Center ♯* L

SocSci, Social Sciences Building ♯*

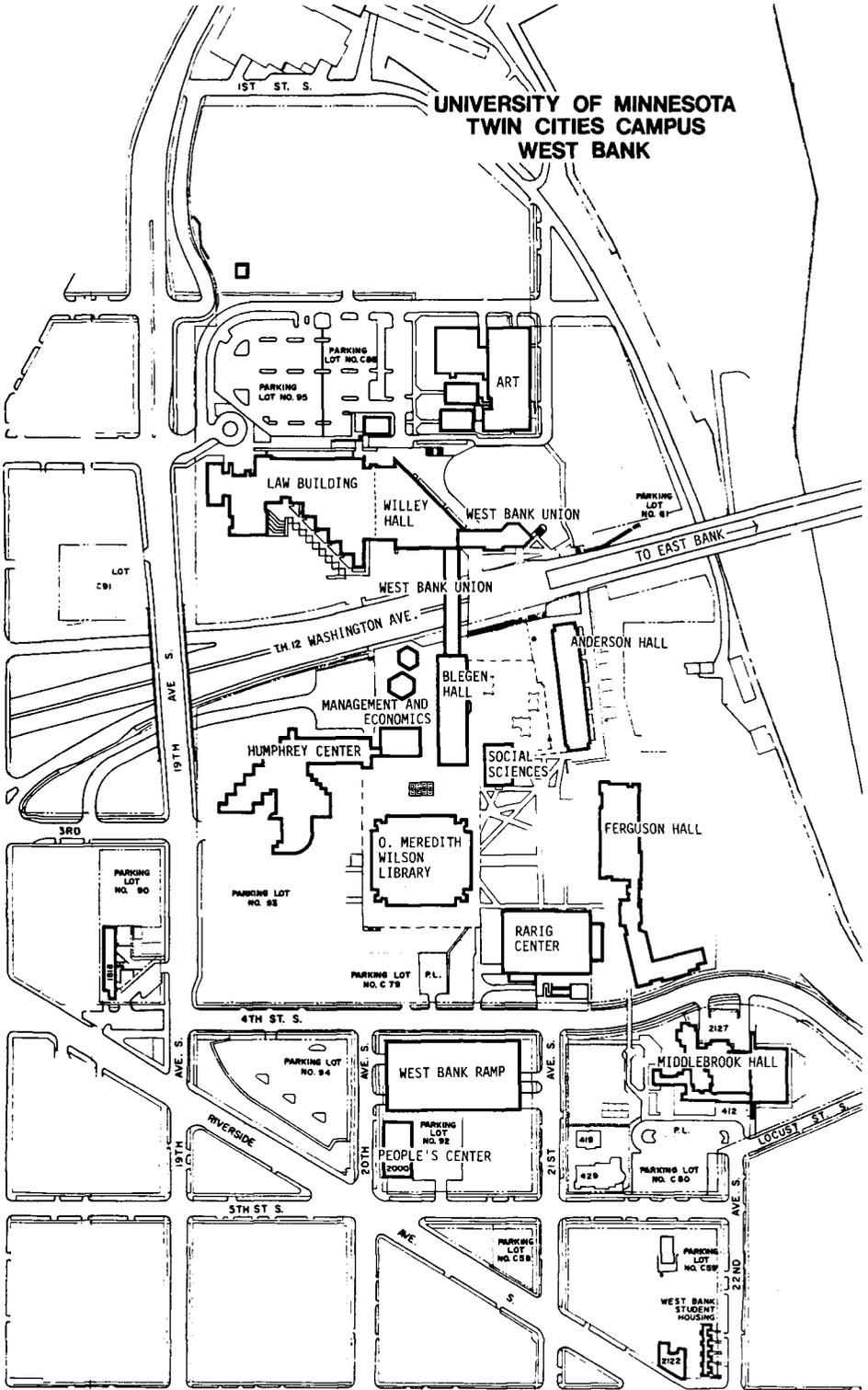
WBU, West Bank Union ♯L

WilleyH, Willey Hall ♯* L

CODES:

- ♯ = accessible building
- = partially accessible
- = inaccessible building
- * = elevator
- L = adapted restroom

UNIVERSITY OF MINNESOTA
TWIN CITIES CAMPUS
WEST BANK



BUILDING ABBREVIATIONS AND BUILDING ACCESSIBILITY INFORMATION

MINNEAPOLIS

East Bank

- AkerH, Akerman Hall ☐
 AmundH, Amundson Hall ♣ * L
 ApH, Appleby Hall ■ *
 Arch, Architecture ♣ * L
 Armory ☐
 BellMus, Museum of Natural History ♣ * L
 BFAB, Bierman Field Athletic Building ☐ * L
 Botany ☐
 BoynHS, Boynton Health Service ♣ * L
 BuH, Burton Hall ♣ * L
 CenH, Centennial Hall
 ChDev, Child Development ♣ *
 ChRC, Children's Rehabilitation Center ♣ * L
 CivMinE, Civil and Mineral Engineering ♣ * L
 CMU, Coffman Memorial Union ♣ * L
 CookeH, Cooke Hall ■
 DiehlH, Diehl Hall ♣ *
 DVCCRC, Dwan Variety Club Cardiovascular
 Research Center ♣ * L
 EddyH, Eddy Hall ■
 EdHAN, Eddy Hall Annex
 ElectE, Electrical Engineering ☐
 EltH, Elliott Hall ♣ * L
 ExpE, Experimental Engineering ■
 FieldHse, University Field House
 FolH, Folwell Hall ♣ * L
 FordH, Ford Hall ♣ * L
 FraserH, Fraser Hall ☐
 FronH, Frontier Hall ♣ *
 HL, St. Anthony Falls Hydraulic Laboratory (Hen-
 nepin Island)
 HSUnitF, Health Sciences Unit F ♣ * L
 JacH, Jackson Hall ♣ *
 JOAd, Jackson-Owre Addition ♣ *
 JohH, Johnston Hall ♣ * L
 JonesH, Jones Hall ■
 KlaCt, Klaeber Court ☐
 KoltH, Kolthoff Hall ♣ * L
 LindH, Lind Hall ♣ * L
 LyonL, Lyon Laboratories
 Mayo, Mayo Memorial ♣ * L
 MechE, Mechanical Engineering ♣ * L
 MinMet, Mines and Metallurgy ♣ *
 MldRH, Millard Hall ♣ *
 MMA, Mayo Memorial Auditorium ☐
 MoosT, Moos Health Sciences Tower ♣ * L
 MorH, Morrill Hall ♣ * L
 MRRC, Mineral Resources Research Center ■
 MurH, Murphy Hall ■
 MusEd, Music Education ■
 NichH, Nicholson Hall ♣ * L
 NMA, Northrop Memorial Auditorium ♣ * L
 NorriaH, Norris Hall ☐ L
 OwreH, Owre Hall ♣ * L
 PeikG, Peik Gym ☐
 PeikH, Peik Hall ☐ *
 Phys, Tate Laboratory of Physics ☐ *
 PiH, Pioneer Hall ☐
 PillsH, Pillsbury Hall ■
 PtH, Pattee ♣ *
 PWB, Phillips Wangensteen Building ♣ * L
 SaH, Sanford Hall ■
 SciCB, Science Classroom Building ☐ *
 ScottH, Scott Hall ■
 ShepLab, Shepherd Laboratories ♣ *
 ShevH, Shevlin Hall ■
 SmithH, Smith Hall ♣ *
 Stad, Stadium ☐ L
 TerH, Territorial Hall ■
 TNA, Temporary, North of Appleby ■
 TNCE, Temporary, North Court of Engineering ■
 VFWCRC, VFW Cancer Research Center
 VinH, Vincent Hall ♣ *
 WaLib, Walter Library ♣ * L
 WesH, Westbrook Hall ■
 WmsA, Williams Arena ☐ L
 WmsnH, Williamson Hall ♣ * L
 WullH, Wulling Hall ☐ *
 Zoology ♣ * L

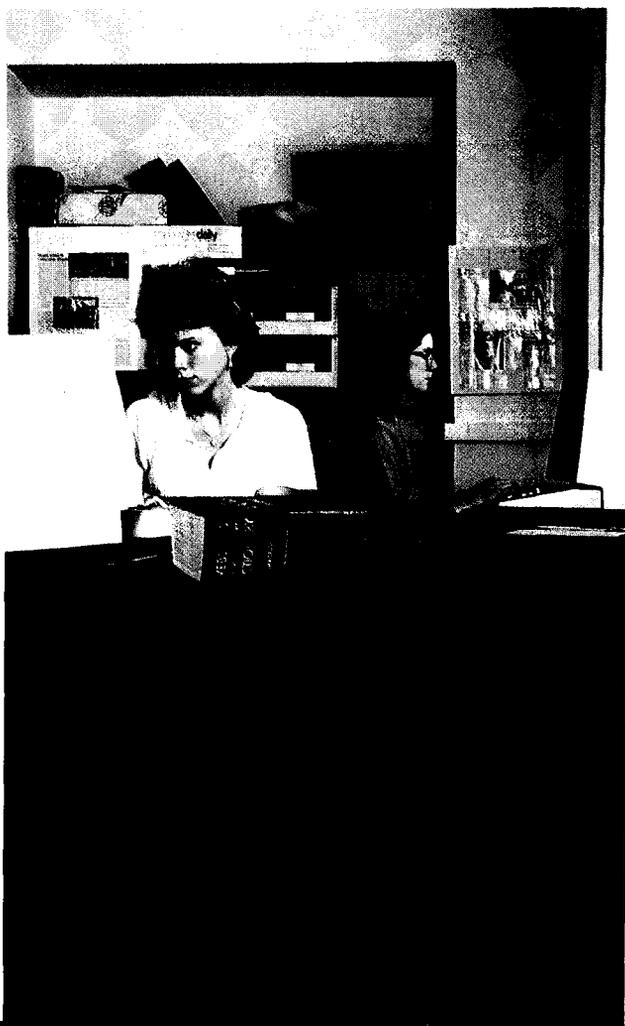
CODES:

- ♣ = accessible building
- ☐ = partially accessible
- = inaccessible building
- * = elevator
- L = adapted restroom

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Journalism and Mass Communication

General Information	3
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Programs of Study	11
-------------------	----

Course Descriptions	15
---------------------	----

Administration and Faculty	20
----------------------------	----

Campus Map	23
------------	----

Introduction

This biennial bulletin describes the School of Journalism and Mass Communication (SJMC) undergraduate programs, courses, procedures, requirements, and learning opportunities.

Students may also refer to the *General Information Bulletin* and the *College of Liberal Arts Bulletin*. These bulletins may be obtained by writing to Student Support Services, 110 Williamson Hall, University of Minnesota, 231 Pillsbury Drive S.E., Minneapolis, MN 55455 (612/625-3030)

University Offices (area code 612):

Admissions—240 Williamson Hall (625-2008)

Financial Aid—210 Fraser Hall (624-1665)

Records—150 Williamson Hall (625-5333)

Registration Center—202 Fraser Hall (625-5333)

Student Accounts Receivable—B-1 Fraser Hall (625-8500)

For More Information—Write Undergraduate Studies Office, School of Journalism and Mass Communication, 18C Murphy Hall, University of Minnesota, 206 Church Street S.E., Minneapolis, MN 55455 or call 612/625-0120.

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, religion, color, sex, national origin, handicap, age, veteran status, or sexual orientation. In adhering to this policy, the University abides by the requirements of Title IX of the Education Amendments of 1972; by Sections 503 and 504 of the Rehabilitation act of 1973; by

Executive Order 11246, as amended; 38 U.S.C. 2012; by the Vietnam Era Veterans Readjustment Assistance Act of 1972, as amended; and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be addressed to Patricia A. Mullen, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, University of Minnesota, 100 Church Street S.E., Minneapolis, MN 55455 (612/624-9547); to the Director of the Office of Civil Rights, Department of Education, Washington, DC 20202; or to the Director of the Office of Federal Contract Compliance Programs, Department of Labor, Washington, DC 20210.

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General Information



General Information

History and Purpose

The University of Minnesota first offered instruction in journalism in 1916. In 1922, a Department of Journalism was organized. In 1941 it became the School of Journalism and in 1966 the School of Journalism and Mass Communication (SJMC). Early instruction focused primarily on newspaper journalism. In 1948, an advertising sequence was developed. Sequences in photocommunication and broadcast journalism were started in the 1960s.

Because the number of students entering the SJMC was putting too great a strain on available resources, it became necessary in 1976 to place limits on the number of students admitted each year, so the present application process was started.

A revision of the curriculum in 1982-83 eliminated the four sequences of news-editorial, advertising, broadcast journalism, and photojournalism. Instead, a central core of six courses was put into place for all majors. Students seeking a career in journalism now apply for major status in a professional program consisting of skills and enrichment courses. A mass communication studies track was made available both as a major and a minor for students seeking to learn about mass communication as one of the liberal arts, equivalent to other CLA degree programs.

William J. Murphy Hall was one of the first buildings in the nation built exclusively for journalism instruction. It now contains facilities for teaching reporting, newspaper and magazine editing, typography, photojournalism, and broadcast journalism. These facilities include the Eric Sevareid Library, a television studio, editing and graphics labs, classrooms, faculty offices, and departmental service offices.

The School of Journalism and Mass Communication presently has a full-time faculty of 18 serving approximately 1,200 students from the pre-journalism status to doctoral candidates, drawn here from across the nation and even across the

world by the School's reputation for scholarship and its consistently high ranking among schools of journalism. Some of the best-known journalism textbooks in use today have been written by SJMC professors. Research and writing continues, and several major projects are always in progress. Prominent faculty members at journalism schools throughout the world are pleased to note that they received their education at the University of Minnesota.

The curriculum of the SJMC, like the School itself, is imbedded in the liberal arts, for the modern professional must understand the role of daily mass communication in our society. Because every human endeavor touches upon or is affected by the mass media, all disciplines within the University are appropriate for study. To encourage an awareness of the diversity of human knowledge significant in the study of mass communication, the SJMC limits the course work taken within the School to approximately one-fourth of the total course work needed for graduation.

Research Center

The Research Center of the School of Journalism and Mass Communication offers its services to faculty and graduate students, especially in data base searches, computer usage, and identifying sources of research funds. The Research Center and the Silha Center for the Study of Media Ethics and Law share offices in 405 Murphy Hall.

Minnesota Journalism Center

Established through a gift from the late John and Elizabeth Bates Cowles, the Minnesota Journalism Center is dedicated to improving the practice of journalism. The MJC coordinates the SJMC's outreach activities, providing an opportunity for journalists and the managers of communication industries to exchange views with journalism educators. This is done through workshops, seminars, conferences, and the publication of papers.

Silha Center for the Study of Media Ethics and Law

The Silha Center for the Study of Media Ethics and Law, established through a gift by Otto and Helen Silha, is dedicated to fostering an appreciation of law and ethics in mass communication. The Center holds conferences, lecture series, and symposia. It provides a publication series and it supports an in-residence doctoral fellow.

Cowles Professor of Media Management and Economics

The Cowles professorship is an endowed chair established through the generosity of the late John and Elizabeth Bates Cowles. As its names implies, the holder of the chair is a senior media manager with national expertise in the organization, operation, and future of information companies, such as newspapers, radio and television stations. The current Cowles professor is John Lavine.

Media Management and Economics Resource Center

MMERC was established in 1985 to offer information on media management and economics to faculty, students, and media agency professionals. The Center is the nation's first computer-based resource center to gather and distribute such information.

Eric Severeid Library

The Eric Severeid Library serves the students and faculty of the SJMC. The collection includes 6,000 books and 180 journal, magazine, and newspaper subscriptions, plus microfilm collections on journalism, advertising, public relations, mass communication theory, broadcasting, visual communication, communication history, and related areas. The collection also includes the Thomas Heggen Memorial Library of materials on creative writing. All holdings are listed in the main University Library system catalog.

National Scholastic Press Association/Associated Collegiate Press

The NSPA/ACP has been affiliated with the U of M School of Journalism and Mass Communication since its establishment more than sixty years ago. NSPA/ACP provides educational evaluation services and awards programs for high school (NSPA) and college newspapers, magazines, and yearbooks. These organizations, located in Rarig Center, are non-profit.

Minnesota High School Press Association

The MHSPA provides services for Minnesota high school publications. Each summer an MHSPA workshop attracts approximately 200 students and teachers, some from out of state. Each fall a statewide conference brings some 1,400 high school students and teachers to the U of M campus. MHSPA publishes a newsletter five times a year and offers consulting services to high schools.

Accreditation

The University of Minnesota School of Journalism and Mass Communication is one of 80 members of the American Association of Schools and Departments of Journalism. The school's news-editorial, advertising, and broadcast programs are accredited by the American Council on Education for Journalism and Mass Communication (ACEJMC). The ACEJMC is a joint professional/educator body authorized by the Council on Postsecondary Accreditation to evaluate and accredit journalism programs in the United States.

Undergraduate Admission

Since the school is part of the College of Liberal Arts (CLA), undergraduate students must first apply for admission to CLA at the Office of Admissions, 240 Williamson Hall, University of Minnesota, 231 Pillsbury Drive S.E., Minneapolis, MN 55455.

General Information

Students who declare during the first year an intention to major in journalism are assigned to a CLA adviser familiar with the requirements of the School of Journalism and Mass Communication. Even while beginning pre-major course work in journalism, students are encouraged to complete CLA requirements for the bachelor of arts degree, including freshman composition, foreign language, and distribution courses.

When the student has begun preparatory journalism course work, he or she is referred by CLA to the School of Journalism and Mass Communication for enrollment as a pre-journalism major. Then the student's overall academic goals and choice of programs within the school are discussed.

Transfer Students—New advanced standing (transfer) students are assigned directly to the SJMC's coordinator of advising for evaluation of journalism course work presented for transfer and for enrollment as a pre-journalism major. The SJMC receives over 200 transfer students annually from almost 90 different schools. Credit is accepted on transfer for work completed in acceptable liberal arts programs. Generally, a course taken at another school is accepted if it is equivalent to a course taught at Minnesota and it was completed with a passing grade. No applied credits such as lab classes or work on the school newspaper are accepted for transfer credits toward a journalism degree. Rarely does the SJMC accept more than 16 journalism credits from another 4-year college or more than 12 credits (lower division only) from a 2-year community college.

Students who plan to start their college work at another institution and then transfer to the SJMC should consult with the coordinator of advising for specific information about courses that may transfer.

Special Opportunities

Honors—Honors activities in the School of Journalism and Mass Communication

include an honors seminar on a topic determined in consultation with a committee of honors students. Occasional colloquiums feature speakers on topics of special interest. SJMC faculty members also occasionally offer honors courses or seminars through the CLA Honors Division, and details about these offerings may be obtained at the Honors office, 115 Johnston Hall.

General Education—Journalism preparatory courses—1001, 1002—are generally open to nonmajors with or without minimal prerequisites. The enrichment courses (see "Course Descriptions") are also open to nonmajors.

Summer Session—The School of Journalism and Mass Communication's summer session program includes a representative offering of undergraduate and graduate courses. The school also sponsors special workshops for secondary school journalism teachers and publication advisers, for minority students with an interest in mass communication, and for high school newspaper and yearbook staff members. Interested students should refer to the *Summer Session Bulletin* for details.

Continuing Education—The SJMC offers journalism study through correspondence and evening classes as part of the programs of the division of Continuing Education and Extension. Some of these courses may be taken for graduate credit. Consult the *Extension Classes Bulletin* and the *Extension Independent Study Bulletin* for further information.

The School's Setting

The Twin Cities area is an excellent location for students to learn through observation and practical experience, providing a "laboratory" that includes federal government offices; the state capitol; numerous state agencies; the Federal Reserve Bank; social service organizations; major league sports teams; music and theatre organizations; and major industries. There are also

a large number of communication agencies, including the Minnesota Newspaper Association; Northwest Daily Press Association; three metropolitan daily newspapers; scores of suburban, community, and specialized publications; regional bureaus of the Associated Press and United Press International; more than 30 radio stations; six television stations; nationally known advertising and public relations agencies; numerous trade, religious, and farm magazines; and leading printing and engraving plants. Field trips are frequently arranged in appropriate classes.

The School of Journalism and Mass Communication also maintains a close liaison with working professionals through the Minnesota Journalism Center which offers conferences, workshops, short courses, and clinics for professionals throughout the Upper Midwest. Other annual offerings and events include the Minnesota Press Women's Short Course for community newspaper personnel, the Northwest Broadcast News Association Conference, and workshops for industrial editors, advertisers, high school journalists, and teachers.

Students have the opportunity to meet distinguished journalists through editor-in-residence programs and guest lectures by leading editors, reporters, photojournalists, broadcast journalists, news analysts, and advertising and public relations executives.

Professional and Honorary Student Associations

Student associations provide a means for students to meet informally and to work with other students who share common interests, to become acquainted with faculty advisers to these groups, and to meet with professionals. There may be field trips, workshops, seminars, and guest lectures, plus a publication issued either by the student group or a national association to which it belongs.

Information about meetings, membership, and group activities is posted on Murphy Hall bulletin boards.

Student organizations include:

The Ad Club—a local affiliate of the American Advertising Federation, open to students planning an advertising career.

Foreign Journalism Students Club.

Kappa Tau Alpha—an honorary scholastic organization; membership by invitation only.

The National Press Photographers Association—a student chapter affiliate of the national organization.

Public Relations Student Society of America—affiliated with the national Public Relations Society of America.

The Radio-TV Guild—a campus affiliate of the national organization.

The Society of Professional Journalists/Sigma Delta Chi—a student chapter of the national SPJ/SDX organization.

In addition, students are invited to join such non-campus groups as the Northwest Broadcast News Association, the Minnesota Newspaper Association, the Minnesota News Council, and the International Association of Business Communicators. Students may often join at special student rates.

Scholarships for Journalism Students

The School of Journalism and Mass Communication each year awards more than 50 scholarships with a total value of more than \$100,000. Most journalism scholarships are based on academic performance and potential for a career in mass communication rather than need. This involves not only grades but evidence of motivation, curiosity, respect for deadlines, participation in extracurricular activities, and awareness of current events and issues.

Most SJMC scholarships are funded by media organizations and groups, donors to memorial funds in behalf of journalists or SJMC faculty members, and by SJMC alumni.

At the start of winter quarter a student who has made a formal declaration as a

General Information

journalism pre-major, is a journalism professional or mass communication major, or is a mass communication minor may get a scholarship application at the Undergraduate Studies Office. The SJMC Scholarship Committee will notify scholarship recipients by mid-May. The awards are formally announced at the annual banquet of the Journalism Alumni Association in May.

Awards are for the ensuing academic year or portion of the year when the recipient will be in residence before graduation. Some scholarships are available for winter and spring quarters. Competition is announced in mid-fall quarter.

Amounts range from \$50 to \$1,000 or more, or full payment of tuition. Students do not apply for specific scholarships, except for the WCCO awards (*see below*). All applications are considered for every scholarship for which they qualify. A list of scholarships is available from the Undergraduate Studies Office about January 15.

Because some scholarships are restricted (e.g., to a particular field of mass communication interest), the more students who apply the more likely it is that all available scholarships can be awarded.

WCCO scholarships are available to minority students who are juniors, seniors, or in graduate M.A. programs. The awards, ranging from \$2,500 to \$2,700, are subject to annual renewal based on academic progress. Applications are due April 1 for the following academic year. Information is available in 111 Murphy Hall.

In addition to the SJMC scholarships, journalism students are urged to apply for nationally awarded scholarships in mass communication. Notices are posted on Murphy Hall bulletin boards.

Journalism students in financial need should also apply for general University scholarships and other financial aid. Information and applications are available at the Office of the Student Financial Aid, 210 Fraser Hall. This office administers two loan funds on behalf of the SJMC. Declared pre-majors and majors may qualify

for emergency assistance and for loans which are interest-free until graduation.

Placement Service

The SJMC offers a job service focused specifically in journalism and other fields of mass communication for full-time, part-time, and intern positions. The service is available to all SJMC undergraduates, graduate students, and graduating seniors. It includes:

- immediate posting of all positions on bulletin boards in the lower hallway of Murphy Hall;
- the Placement Bulletin, printed twice monthly, mailed on request;
- assistance with planning a job search, preparing a resume, scheduling interviews, and being interviewed;
- referral of job leads to students whose resumes are on file in the job service office, Murphy Hall 15; such referrals usually are for entry-level jobs.

Students are encouraged to use the SJMC job service in conjunction with the services of the CLA Career Development Office, the Office of Special Learning Opportunities, and recommendations from SJMC faculty.

Mentoring Program—A mentoring program co-sponsored by the Minnesota Alumni Association and the SJMC each quarter matches students with professionals, many of whom are themselves graduates of the School. This personal contact reinforces and supplements the curriculum by introducing the student to the daily activities, experiences, and problems of people who work in the student's designated field of interest. Begun in 1983, the mentoring program has been widely praised by both professional and student participants.

Minnesota Daily—The *Minnesota Daily*, the official newspaper of the U of M, has a circulation of 45,000 and a readership of 80,000. The *Daily* trains journalists on modern equipment like the Atex system. Approximately half of the *Daily's* staff are

SJMC students. They work as reporters, photographers, copy editors, ad salespersons, and managers.

WMMR and Newswatch—Students interested in radio or television news can gain on-campus experience through the student-managed radio station, WMMR, in Coffman Union and the twice-weekly campus television newscast, *Newswatch*, of the SJMC.

Alumni Association

Graduates of the School of Journalism and Mass Communication are invited to join the University of Minnesota Alumni Association, which also includes membership in the Journalism Alumni Society.

Membership applications are available at 100 Morrill Hall. The annual membership fee of \$10 provides all the services and benefits of both the University and the SJMC alumni organizations. These include the University's monthly alumni magazine and issues of the SJMC's *Murphy Reporter*, which reports on what is happening at the School, what professors are doing, and what former students are doing.

After you graduate you can keep in touch with the School and your former classmates by letting the *Reporter* know where you are working, honors and awards, etc.

Alumni are invited to the Journalism Alumni Society banquet each spring. If the School has your current address you will get program and ticket information in the mail. The Alumni Society will also sponsor a gathering in another city, where a group of alumni expresses interest, and will consider requests for speakers. Send inquiries to the Director of the SJMC.

Access to Student Educational Records

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

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

Students are notified annually of their right to review their educational records. The regents' policy, including a directory of student records, is available for review at the information center in Williamson Hall, Minneapolis, and at records offices on other campuses of the University. Questions may be directed to the Office of Registration, Student Records, and Scheduling, 150 Williamson Hall (612/625-5333).

Programs of Study



Programs of Study

Baccalaureate Degree

The School of Journalism and Mass Communication offers a bachelor of arts (B.A.) degree with two programs—professional and mass communication—from which a student may choose, as well as a minor sequence in mass communication.

B.A. Major Sequence— Professional Program

This program seeks to prepare students for a variety of careers in journalism, including media management, news-editorial, advertising, magazine writing and editing, broadcasting, public relations, and visual communication. It is based on a broad liberal arts foundation, knowledge of the social and professional responsibilities of communicators, and beginning competence in journalistic skills. About three-fourths of the course work for the degree is completed in the social sciences, the humanities, and other liberal arts areas, with the remainder in journalism, where many of the courses also have a liberal arts focus.

Admission—The School of Journalism and Mass Communication admits a limited number of undergraduate professional program students annually. A formal intention to major in journalism should be filed with the coordinator of advising, 15A Murphy Hall, before enrolling in Jour 1003. A student should apply for formal admission to the professional program after completing preparatory courses 1001, 1002 and 1003; completing three of the supporting courses on an A-F grading basis; taking the College Entrance Examination Board English composition test; passing a 30-wpm typing test administered by the school; and acquiring at least 60 CLA credits. Complete application information is available in the Undergraduate Studies Office of the school.

Specialized Professional Program—A specialized professional program may be

planned in consultation with an adviser. Examples are public affairs journalism, international communication, community newspaper management, graphic arts, communications research, newspaper design, public relations, broadcast advertising, magazine editing, and urban reporting.

Supporting Course Work—Econ 1001-1002; Pol 1001; Hist 1301-1302 or 3821-3822 or 3822-3823; for students whose primary interest area is advertising, public relations, or management—Psy 1001; for students whose primary interest area is broadcast journalism, public relations, or management—Spch 1101. Completion of freshman composition (or exemption), and two additional composition courses certified by the school, one of which must be taken at the 3xxx level. (See *English Composition Requirements for Journalism Majors and Minors* below.)

Required Preparatory Courses—Jour 1001, 1002, 1003, 1004

Major Requirements—One course with a grade of C or better from Group IA; one course from Group IC; four courses from Group II, one of which must be 3007 or 3008; 3 additional courses, from Groups I, II, and III. The B.A. program consists of 48 journalism credits.

Major Project—All journalism majors are required to complete a major project prior to graduation. See *Major Project Options* below.

B.A. Major Sequence— Mass Communication Program

This program is intended to be equivalent to degree work in other CLA social science disciplines. Beyond a core of journalism courses also required for the professional program, students elect a number of enrichment courses (Group II) in journalism aimed at exploring mass communication as a social, economic, and political phenomenon. Students are additionally encouraged to choose CLA courses

appropriate to the study of mass communication. Consultation with the director of undergraduate studies is advised.

Admission—Application for admission to the mass communication program is not required, but students must develop a plan of study in consultation with the coordinator of advising after completing 1001, 1002 and 1003 with a 2.50 grade point average across the three courses. These and 1004, with a grade of C or better must be completed before undertaking major requirements.

Supporting Course Work—Completion of freshman composition (or if exempted one 1xxx or 3xxx composition course) (see *English Composition Requirements for Journalism Majors and Minors* below). No other specific supporting course work is required, but students should consult with the director of undergraduate studies about appropriate recommended courses.

Required Preparatory Courses—Jour 1001, 1002, 1003, 1004

Major Requirements—A minimum of 7 courses from Groups II and III, one of which must be 3007 or 3008 (3201 may be counted as one of these 7 courses); a 3xxx or 5xxx composition course, selected from a list of courses approved by the school. The B.A. program consists of 40 journalism credits.

Major Project—All mass communication majors are required to complete a major project prior to graduation. See *Major Project Options* below.

**Minor Sequence—
Mass Communication**

Admission—Application for admission to the minor is not required. However, students must develop a plan of study in consultation with the undergraduate studies office after completing 1001 and before undertaking upper level requirements.

Supporting Course Work—Completion of freshman composition (or exemption), and two additional composition courses

certified by the school, one of which must be taken at the 3xxx level (see *English Composition Requirements for Journalism Majors and Minors* below).

Required Preparatory Course—Jour 1001; "Optional Prep Course"—1002

Minor Requirements—A minimum of 7 courses from Groups II and III, one of which must be 3007 or 3008 (1002 and 3201 may be counted among those 7 courses).

Secondary education students in the College of Education may minor in Journalism by taking Jour 1001; 3776; at least two from 3101, 3155, and 3301; 5182; and one or two enrichment courses (5601 is recommended) to total 26 credits.

**English Composition Requirements
for Journalism Majors and Minors**

1. Completion of (or exemption from) the freshman composition requirement as established by the College of Liberal Arts.
2. Completion of a second composition course from among the following: Comp 1027, Intermediate Expository Writing; 3011, Writing About Literature; 3012, Writing About Non-Fiction Texts; 3013, Writing for Arts Other Than Literature; 3014, Writing for the Quantitative Social Sciences; 3015, Writing About Science; 3027, Advanced Expository Writing; 3050, Topics in Advanced Composition; 3080, Special Projects in Advanced Composition; 3085, Conference Course in Advanced Composition (must be taken for 4 credits).
3. Completion of one of the following composition courses (will also satisfy the CLA upper division writing requirement): Comp 3011, Writing About Literature; 3012, Writing About Non-Fiction Texts; 3013, Writing About Arts Other Than Literature; 3014, Writing for the Quantitative Social Sciences; 3015, Writing About Science; 3027, Advanced Expository Writing; 3050, Topics in Advanced Composition; 3080, Special Projects in Advanced

Programs of Study

Composition; 3085, Conference Course in Advanced Composition (must be taken for 4 credits).

Note: Comp 3050, 3080, and 3085 are infrequently offered.

Major Project Options

1. Professional program majors may take any two of the following courses (at least one of which must be at the 5xxx level) to satisfy the major project requirement:

Jour 3121, 3173, 3193, 3241, 3301, 3321, 3451, 5131, 5133, 5141, 5143, 5155, 5159, 5174, 5233, 5261, 5263, 5272, 5301, 5302, 5303, 5322, 5441, 5442, 5444, 5725, 5726.

2. Mass communication emphasis majors may take two of the following courses, chosen from two different groups, to satisfy the major project requirement: Jour 5501, 5531 (Group 1); 5316, 5601, 5606, 5611, 5614, 5615 (Group 2); 5721, 5777 (Group 3); 5801, 5825, 5826 (Group 4).

3. *Either* professional or mass communication program majors may satisfy the major project requirement with one of the following plans:

a. An instructor in any 5xxx journalism course may define and apply appropriate

standards for an extra assignment involving greater length, greater depth, or broader context than normal. Students would enroll for *one* extra credit in the selected course, using an "X" registration.

b. Students successfully completing a paper or project for academic credit based on an internship performed under customary academic supervision may satisfy the major project requirement, using the Jour 3970 designation.

c. Students successfully completing the honors program may satisfy the major project requirement.

d. Students may complete Jour 3970, Directed Studies, for four credits to satisfy the major project requirement, subject to the direction and evaluation of the instructor.

Graduate Degrees

The SJMC offers both M.A. and Ph.D. degrees. For additional information and application forms, write to the Director of Graduate Studies, 111 Murphy Hall, University of Minnesota, 206 Church Street S.E., Minneapolis, MN 55455.

Course Descriptions



Course Descriptions (Jour)

Symbols—The following symbols are used throughout the course descriptions in lieu of page footnotes:

- § Credit will not be granted if the equivalent course listed after this symbol has been taken for credit.
- ¶ Concurrent registration is allowed (or required) in the course listed after this symbol.
- # Registration Override Permit, completed and signed by the instructor, is required prior to registration.
- △ Registration Override Permit, completed and signed by the department offering the course, is required prior to registration.

Preparatory

1001. INTRODUCTION TO MASS COMMUNICATION. (2 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.

1002. VISUAL COMMUNICATION. (2 cr)

Form, content, and meaning in visual communication. Introduction to basic visual elements and techniques. Issues in perception, picture use and the sources of visual conventions. Attention to the organization and production of visual media. Applications to photography, film, television, advertising, and documentary work.

1003. PRODUCING MASS MEDIA MESSAGES. (4 cr; prereq formal pre-journalism professional or pre-mass comm status, 1001, fr composition or exemption, △)

Examination and analysis of mass media messages; practice, under instruction, in writing factual and persuasive messages. Emphasis on 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.

1004. INFORMATION FOR MASS COMMUNICATION. (4 cr; prereq 1003, △)

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, data bases, and interviews.

I. Professional

These courses, except for 3201, are not open to students in mass communication. Professional journalism students must have official major status and have completed 1004, with a grade of C or better, before enrolling.

Group A

3101. REPORTING. (4 cr; prereq professional major status, grad students must pass 30 wpm, △)
Fact gathering and journalistic writing. Problems in judgment and handling of news and news features.

3201. PRINCIPLES OF ADVERTISING. (4 cr; no prereq for non-journalism majors... prereq major status for professional journalism and mass communication students...1001 and filed study plan for mass communication minors)
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 professional major status, △)
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 3101, grad students must pass 30 wpm, △)
Reporting and editing news of courts and municipal, county, state, and federal administrative and legislative agencies.

3155. PUBLICATIONS EDITING. (4 cr; prereq 3101, △)

Selection and editing of news-editorial content of newspapers, brochures, magazines. Newspaper make-up, magazine format. Press association teletype service. Lecture and laboratory.

3159. PUBLIC RELATIONS. (4 cr; prereq 16 cr in social science depts, △)
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 3101, △)
Writing feature articles for general, class, and trade publications; study of market free-lance methods.

3176. BUSINESS AND INDUSTRIAL JOURNALISM. (4 cr; prereq 3155; 3121 or 3173; #, △)
Analysis of content, staffing, design, and production of business and company publications. On-the-job projects of gathering material and writing feature articles for the business and company press.

3193. COMMUNITY NEWSPAPER. (4 cr; prereq professional journalism major status, #, 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 professional journalism major status, 3201 or #, Δ)
Advertising appeals and strategy; advertising for print and broadcast. Individual and group projects.

3321. BASIC MEDIA GRAPHICS. (4 cr; prereq professional journalism major status, #, Δ)
Basic introduction to mass media graphics, including design principles and history, production technology, typographic legibility research, and analysis of printing and production costs.

3451. TELEVISION AND RADIO NEWS. (4 cr; prereq 3101, Δ; 2 lect, 3 lab, 3 news production hrs per wk)
Writing, interviewing, delivery, audiotape editing, graphics preparation. Production of radio newscasts and a radio documentary.

5182. SUPERVISION OF SCHOOL PUBLICATIONS. (4 cr; prereq professional journalism major status or #, Δ)
Editorial content, staff organization, editing, typography, makeup, business management for those who plan to be advisers for high school or college newspapers, yearbooks, magazines.

Group C

5131. INTERPRETIVE REPORTING. (4 cr; prereq 3121 or 3173 or 5144 or 5155, Δ)
Advanced problems in reporting about government, politics, social problems, and the arts.

5133. INTERPRETIVE REPORTING ABOUT SCIENCE. (4 cr; prereq 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 one 3xxx writing course, major or grad status for professional journalism students with #, Δ)
Oral and written analysis of major political, economic, social developments. Persuasive communication in newspapers and magazines; columnists; commentators.

5143. INTERPRETATION OF SCIENCE AND TECHNOLOGY. (4 cr; prereq professional journalism major status, 5133 or #, Δ)
Analysis of scientific research and technological development for mass and specialized media; critical study of science content in media; audience impact.

5155. ADVANCED REPORTING METHODS. (4 cr; prereq professional journalism major status, 3101 or grad student or professional experience with #, 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 professional journalism major status or #, 3159, Δ)
Case study approach in applying public relations principles to solve problems in business, government, education, and community. Designed to enable students to sharpen their perceptions, insights, and judgments in examining practical and ethical questions.

5171. ARTS REVIEWING. (4 cr; prereq one 3xxx writing course, major or grad status for professional journalism students, #, Δ; offered alt yrs)
Book, theatre, and visual media reviews. Analysis of leading critics and critical periodicals. Weekly reviews.

5174. MAGAZINE EDITING AND PRODUCTION. (4 cr; prereq 3173 or 5302 or 5322, #, Δ)
Writing, editing, illustration, design, layout, photo-composition of a single-issue magazine.

5233. GRAPHIC DESIGN ANALYSIS. (4 cr; prereq professional journalism major status, 3321 or #, Δ)
Publication formats for design and efficiency; historical and current trends; field projects; creative problems.

5261. ADVERTISING: MEDIA ANALYSIS. (4 cr; prereq professional journalism major status, 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 AND MEDIA STRATEGY. (4 cr; prereq professional journalism major status, 5261, Mktg 3000 or #, Δ)
Relation of campaign strategy to media measurement, evaluation, and planning. Coordination of advertising campaigns; media scheduling and purchasing.

5272. ADVANCED ADVERTISING COPYWRITING. (4 cr; prereq 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 3301, Δ)
Codes in photographic communication. Producing photographs for publication contexts. Color theory. Examination of important photographers. Film and processing expenses.

Course Descriptions (Jour)

5303. PROJECTS IN PHOTOGRAPHIC COMMUNICATION. (4 cr; prereq 5302, Δ)

Advanced projects in documentary photography; structuring visual narratives. Comparison of exhibition/publication formats. Historical, ideological approaches to documentary photography. Film and processing expenses.

5322. NEWSPAPER DESIGN. (4 cr; prereq 3321, Δ)

Elements of newspaper design; historical survey of newspaper make-up; use of typography, photography, hand art to create visual and verbal communication; legibility studies; experimental formats.

5441. ELECTRONIC NEWSGATHERING. (4 cr; prereq 3451 or 5302, Δ; 2 lect, 3 lab, 3 news production hrs per wk)

Theory and practice of effective communication with video as applied to broadcast journalism. Lectures, demonstrations, and exercises in planning, lighting, shooting, editing, and scripting typical broadcast news assignments. Analysis of theory and research on social impact of electronic journalism.

5442. ADVANCED TELEVISION NEWS. (4 cr; prereq 3451, Δ; 2 lect, 3 lab, 3 news production hrs per wk)

Newsfilm editing; preparation and delivery of television newscasts. Current problems; legal and ethical considerations.

5444. TELEVISION AND RADIO DOCUMENTARY. (4 cr; prereq 3451 or 5174 or 5302, Δ; 2 lect hrs, field and lab hrs as needed)

Scope and techniques. Production of television or radio news documentaries of broadcast quality.

II. Enrichment

Non-journalism students meeting the prerequisites may enroll in these courses.

Mass communication majors may enroll in these courses if they have approved status. Professional journalism students must have official major status before enrolling. Mass Communication minors may enroll in these courses after filing a study plan.

3007. THE MEDIA IN AMERICAN HISTORY AND LAW: CASE STUDIES. (4 cr; prereq Δ; 1001 for non-journalism majors...approved status for professional and mass communication majors...filed study plan for mass communication minors)

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 Δ; 1001 for non-journalism majors...approved status for professional and mass communication majors...filed study plan for mass communication minors)

Analysis of a variety of communication theories as they relate to mass communication processes; major structural aspects of mass communication systems as they influence mass communication processes.

3776. MASS COMMUNICATION LAW. (4 cr) 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, §Pol 3796; prereq major status for journalism students, 1001 or Pol 1001 or #)

Analysis of role of mass media in politics; emphasis on television and electoral campaigns; news coverage versus newsmaking. Free press in democracy.

5221. PUBLICATION GRAPHICS. (4 cr; prereq 8 cr in 3xxx or 5xxx courses in art and design or #) Role of printing processes in graphic communication. Technique and production of illustrations. Significant developments in graphic arts technology.

5251. PSYCHOLOGY OF ADVERTISING. (4 cr, §Psy 5751; prereq Psy 1001) Psychological principles, research techniques, and applications in advertising and selling. Consumer attitudes and behavior. Psychological mechanisms upon which effectiveness of advertisements and commercials depends.

5274. SOCIAL, ECONOMIC, AND REGULATORY ASPECTS OF ADVERTISING. (4 cr; prereq sr or grad status, 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) 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 16 cr in social science depts) 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 5501 or Soc 5355) 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.

5601. HISTORY OF JOURNALISM. (4 cr)
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 #, Δ; offered alt yrs)
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)
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.

5614. HISTORY OF MASS COMMUNICATION TECHNOLOGY. (4 cr)
History of the instruments of mass communication. How they work. Their impact on our lives.

5615. HISTORY OF VISUAL COMMUNICATION IN THE MASS MEDIA. (4 cr)
Social history of photography, film, and video. Informational, documentary, and entertainment functions of visual communication. Organizational structures, visual styles, and audiences.

5721. MASS MEDIA IN A DYNAMIC SOCIETY. (4 cr; prereq 16 cr in social science depts)
Economic, political, and social determinants of character and content of mass communication in America. Impact, structure, functioning of mass media. Problems, prospects, criticism. Professionalism, technology, reform.

5725. THE MANAGEMENT OF MEDIA ORGANIZATIONS. (4 cr; prereq 16 cr in social science depts)
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 16 cr in social sciences, #, Δ...5725 recommended but not required)
Case studies in 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.

5731. CURRENT COMMUNICATIONS PROBLEMS. (4 cr; prereq professional journalism or mass communication sr, 16 cr in social science depts, #, Δ)
Individual project and seminar method of analysis of major contemporary problems of communication, both descriptive and normative.

5731H. HONORS COURSE: CURRENT COMMUNICATIONS PROBLEMS. (4 cr; prereq professional journalism or mass communication sr, 16 cr in social science depts, #, Δ)
For description, see 5731.

5777. CONTEMPORARY PROBLEMS IN FREEDOM OF SPEECH AND PRESS. (4 cr; prereq 16 cr in social science depts)
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 16 cr in social science depts)
Global telecommunications, channels, artifacts of international mass communication. Problems in free flow of information. Roles of international organizations, journalism. Mass communication in social, political, educational, economic development; implications for conflict resolution.

5825. WORLD COMMUNICATION SYSTEMS. (4 cr; prereq 16 cr in social science depts)
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.

5826. MASS COMMUNICATION SYSTEMS OF WESTERN EUROPE. (4 cr; prereq 16 cr in social science depts)
Implications of mass media and telecommunications, with analysis of historical origins, contemporary sociocultural issues, and roles in Western European and international affairs.

III. Independent Study

3970. DIRECTED STUDIES. (1-4 cr per qtr; prereq major status for professional journalism and mass communication students, #, Δ)
Guided individual reading or study.

5970. ADVANCED PROJECTS IN JOURNALISM. (1-4 cr per qtr [8 cr max]; prereq major status for professional journalism and mass communication students, B avg, #, Δ)

5970H. HONORS COURSE: ADVANCED PROJECTS IN JOURNALISM. (1-4 cr per qtr [8 cr max]; prereq major status for professional journalism and mass communication students, B avg, #, Δ)

5990. SPECIAL TOPICS IN MASS COMMUNICATION. (4 cr per qtr [8 cr max]; prereq major status for professional journalism and mass communication students, #, Δ)
Topics specified in *Class Schedule*.

Administration and Faculty

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School of Journalism and Mass Communication Administrator

MaryAnn Yodelis Smith, Director
Linda L. Wilson, Assistant to the Director

School of Journalism and Mass Communication Faculty

Brovald, Walter H. Professor. BS with honors, English, University of Wisconsin; MA, mass communication, University of Minnesota. Newspaper reporter, editor, and editor-publisher of weekly newspapers, assistant radio news editor, advertising agency copywriter, and account executive.

Busterna, John C. Assistant Professor. BA, economics and communication arts, University of San Francisco; MA, journalism, University of Wisconsin, Madison; PhD, mass communication with emphasis on media economics, University of Wisconsin, Madison. Media research manager, newspaper and advertising firm.

Carter, Roy E. Jr. Professor. BA, English-Journalism, Kansas State College; MA, journalism, University of Minnesota; PhD, Stanford University. Newspaper editorial staff member and editorial writer, and editor, trade and business publications. Taught at Ohio Wesleyan, Stanford, and University of North Carolina.

Charnley, Mitchell. Professor Emeritus. BA, English, Williams College; MA, journalism, University of Washington. Reporter and editorial writer, newspapers and magazines in the U.S., freelance writer in Europe and North Africa; newswriter at KSTP-TV and WCCO-TV.

Craff, Dennis. Lecturer. BA, journalism, University of Minnesota. Television reporter and anchor, KSTP-TV, television producer for regional network. Now a freelance news producer.

Craig, Robert L. Assistant Professor. BA, English and science, MA, journalism, PhD, mass communication, University of Iowa. Editor and reporter. Taught graphics and typography, National Institute for Higher Education, Dublin, Ireland; City University of London, and University of Iowa.

Dicken-Garcia, Hazel F. Associate Professor. BA, English, Berea College; MA, journalism, University of Michigan; PhD, mass communication, emphasis in law and history, University of Wisconsin. Worked in newspaper editorial, promotion and advertising. Taught at universities of Wisconsin, Iowa, Maryland, Michigan, and Massachusetts; American University, Smithsonian Institution, and Grandhigram Rural Institute, Madras, India.

Emery, Edwin. Professor Emeritus. BA and PhD, history, University of California, Berkeley. Wire service bureau manager, magazine editor, newspaper reporter, and editorial writer. Taught at University of California.

Fang, Irving E. Professor. Director of Undergraduate Studies. BA, English; MA, journalism; PhD, speech, UCLA. Reporter-photographer in Nebraska, South Carolina and Alabama; editor, editorial writer, in California; Reuters rewrite desk, London; editorial adviser, Nigeria; TV news writer, producer, KABC-TV and ABC, Los Angeles; asst. mgr., ABC Political Unit, consultant to ABC News, New York.

Finnegan, John. Lecturer. Director of Minnesota Heart-Health Program. BA, English, College of St. Thomas; MA and PhD candidate in mass communication, University of Minnesota. Reporter, editor, and freelance writer in the Twin Cities.

Gerald, J. Edward. Professor Emeritus. BA, English, West Texas Teachers College; Bachelor of Journalism, University of Missouri; PhD, political science, University of Minnesota. Also studied at London School of Economics. UP correspondent and newspaper editor. Taught at University of Missouri.

Gersten, Alan. Lecturer. BA, University of Colorado. Worked for major advertising firms in New York and Minneapolis specializing in media planning, research, and analysis.

Gillmor, Donald M. Professor. BA, liberal arts, University of Manitoba; MA and PhD, mass communication, University of Minnesota. Newspaper reporter and editor. Taught at University of North Dakota.

Glasser, Theodore L. Associate Professor. BS, political science and journalism, Baker University; MS, mass communication, Oklahoma State University; PhD, mass communication, University of Iowa. Editor of trade and professional publications. Taught at University of Iowa and University of Hartford.

Hage, George. Professor Emeritus. BA and MA, journalism, PhD, American Studies, University of Minnesota. Newspaper reporter, editor, and reviewer.

Hansen, Kathleen. Assistant Professor. Chief librarian, Severeid Library. BA, English, University of Wisconsin, Parkside; MA, English and MA, library science, University of Wisconsin, Madison. Worked on journalism and library positions.

Harris, Virginia. Associate Professor Emeritus. B.Ed., Illinois State College; postgraduate studies, University of Michigan. Copywriter, freelance writer, and broadcaster.

Jarvis, John. Lecturer. BS, journalism and MS, mass communication, both at University of Minnesota. Copywriter, various Twin Cities advertising agencies. Currently working as copywriter.

Jones, Robert L. Professor Emeritus. Former director of SJMC. BA, journalism, University of Wichita; MA and PhD, psychology, University of Minnesota. Newspaper editor, public relations assistant, and chief of Air Force intelligence unit.

Kirk, Judith. Lecturer. BS, radio and television, Indiana University. Public information officer, public relations writer, ad agency copywriter and creative director in the Twin Cities.

Lavine, John M. Cowles Professor of Media Management and Economics. BA, Political Science, Carleton; honorary LLD, Emerson College. Newspaper editor, publisher, and owner of several Wisconsin newspapers. Former regent, University of Wisconsin. Former president and chairman, Inland Daily Press Association.

Lee, Chin-Chuan. Associate Professor. BA, journalism, National Chengchi University, Taiwan; MA, communication, University of Hawaii; PhD, mass communication with emphasis in international journalism, University of Michigan. Editor, free-lance correspondent, columnist, and consultant. Taught at Chinese University of Hong Kong.

Administration and Faculty

Lindsay, Robert. Professor Emeritus. BA, American literature and MA, journalism and political science, University of Wisconsin; PhD, mass communication, University of Minnesota. Reporter, news director, UPI, radio and television stations; space communications chief, UNESCO, Paris. Taught at University of Wisconsin.

Nixon, Raymond. Professor Emeritus. BPh in English and history, Emory University; MA, journalism, University of Wisconsin; PhD, political science, University of Minnesota. Newspaper freelancer in Florida, Georgia, and Maryland. Taught at Emory University.

Parker, Walter. Lecturer. BA, University of Montana. Worked as an environmental writer and general assignment reporter in Spokane, WA. Since 1980 worked at *St. Paul Pioneer Press and Dispatch* in various reporting positions. From 1984 to present has been the paper's medical writer.

Roberts, Nancy L. Assistant Professor. BA, history, Swarthmore College; MA, American civilization, Brown University; MA and PhD, mass communication, emphasis in history and literary aspects of journalism, University of Minnesota. Newspaper and magazine writer. Taught at University of Rhode Island.

Schneider, Stephen J. Lecturer. BA, German, Macalester College; MA, mass communication, University of Minnesota. Advertising agency photographer. Now owns photography business.

Schwartz, Dona B. Assistant Professor. BA, independent major, visual communication; MA and PhD, mass communication, University of Pennsylvania. Documentary photographer and filmmaker. Taught at University of Pennsylvania and St. Joseph's University.

Sim, John. Professor Emeritus. BA, journalism, University of North Dakota; MA journalism, University of Minnesota. Newspaper managing editor. Taught at universities of North Dakota, Alabama, and New Hampshire.

Smith, MaryAnn Yodelis. Professor and Director, SJMC. BA, English, secondary education, theology, Briar Cliff College; PhD, mass communication, University of Wisconsin. Editor and writer for news publications and publicity work.

Thompson, Willard. Professor Emeritus. BS, journalism; MS and PhD, mass communication, all at University of Illinois. Newspaper reporter, editor, and advertising sales manager, and as general manager of a broadcasting station.

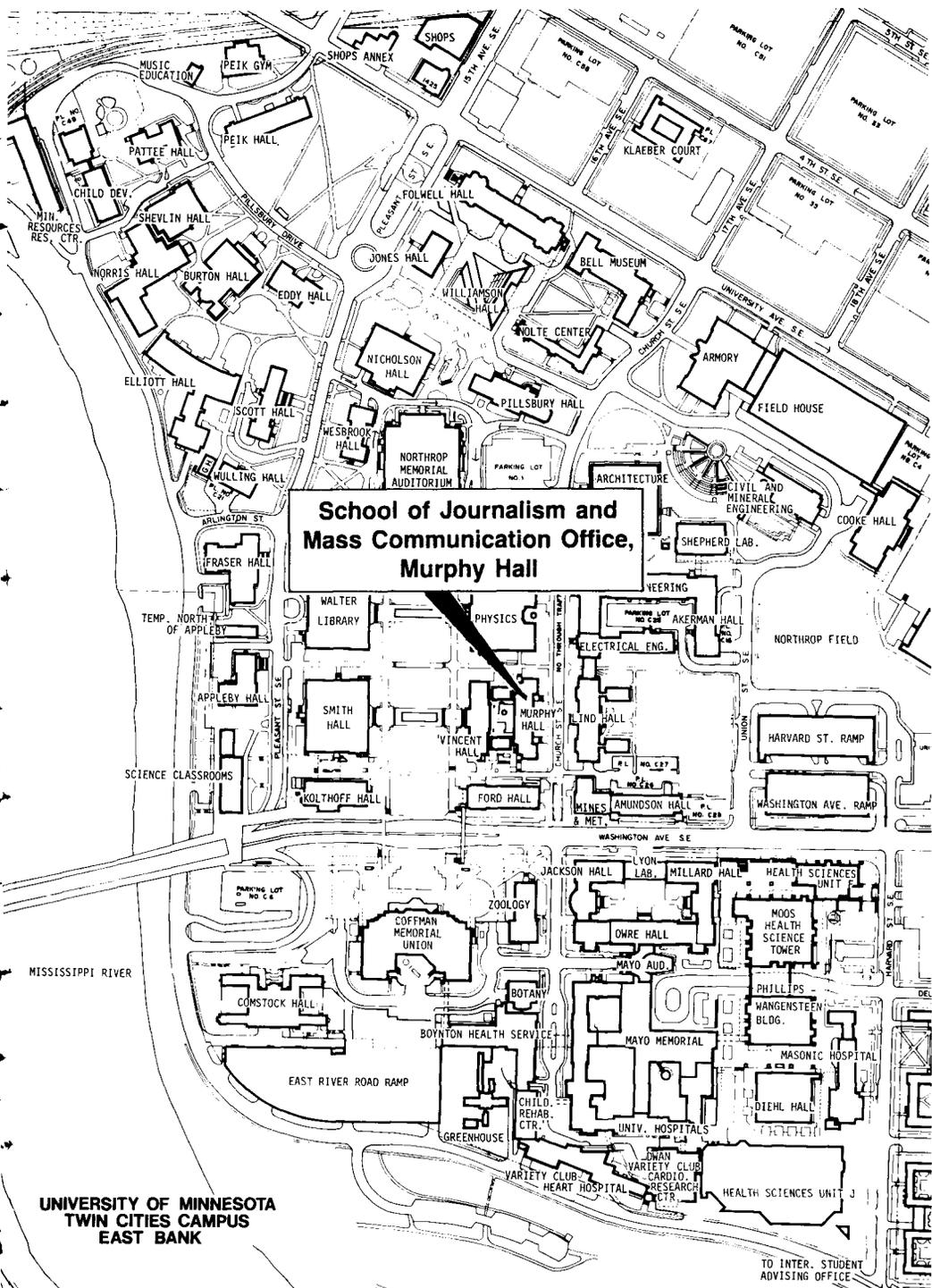
Tichenor, Phillip J. Professor. BS and MS, agricultural journalism, University of Wisconsin; PhD, mass communication, Stanford University. Editorial assistant and consultant in agriculture at the Universities of Minnesota and Wisconsin.

Ullmann, John. Lecturer. BA, journalism and economics, Butler University; MA, communications, American University; PhD candidate, journalism and environmental science, University of Missouri. Editor and reporter for daily newspapers in Missouri, Indiana, Alaska, Washington, D.C. Currently is editor of special projects at the *Minneapolis Star and Tribune*.

Wackman, Daniel B. Professor. BS with honors; MS, political science; MS, journalism; PhD, mass communication, University of Wisconsin, Madison. Worked with news service and as marketing researcher, University of Wisconsin. Taught at Michigan State University.

Ward, Jean W. Associate Professor. BA, journalism and PhD, American Studies, University of Minnesota. Weekly and daily newspaper reporter.

Wilson, Harold. Professor Emeritus. BS, journalism, South Dakota State University; MA, journalism, University of Kansas. Printer and typographer at both universities.



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